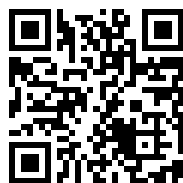

This is a reproduction of a library book that was digitized by Google as part of an ongoing effort to preserve the information in books and make it universally accessible.

Google™ books

<https://books.google.com>



nos, 251, 252, 255-257



AMES LIBRARY
OF SOUTH ASIA

Founded by

Charles Lesley Ames

UNIVERSITY OF MINNESOTA LIBRARY

AMES LIBRARY OF SOUTH
ASIA

The JOURNAL of the UNITED SERVICE INSTITUTION of INDIA

CONTENTS.

Editorial.

1. A Note on the Economic Independence of the United States, by Captain D. H. Cole, M. B. E.
2. An Army Air Arm, by Major E. J. Strover.
3. The Cardwell System (A reply to a Criticism), by Lee-Enfield.
4. Notes on Appointments, Instructions, Operation Orders and Message Writing, by Captain O. G. Body, D. S. O.
5. An A. F. (I.) Annual Camp, by Major P. Penn.
6. Notes on "Q" Organization for War (India), by Captain G. N. Molesworth.
7. Organization of the Indian Army-A lecture delivered at the Army Headquarters Staff College Course, 1927 by Colonel L. F. Arthur, D. S. O., O. B. E.
8. Notes on Jungle Warfare, by Captain J. W. Young.
9. The Source of Disciplinary Authority, by Captain H. Bullock.
10. With the XIII Division Signal Company in Gallipoli, by Bt. Lt.-Colonel H. E. Crocker, C. M. G., D. S. O.

Military Notes.

Correspondence.

Reviews.

Printed by E. A. Smedley at
The Civil & Military Gazette Press, Lahore
And published by Major J. G. Smyth, for the United Service
Institution of India, Simla.
Price Rupees 2-8-0.
[All Rights Reserved.]

UNITED SERVICE INSTITUTION OF INDIA.

Rules of Membership.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Auxiliary Force, India, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members, the members of the Diplomatic Corps, foreign, naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—

Rupees 120 + entrance fee (Rs. *10) = Rs. 130.

Ordinary Members of the Institution shall be admitted on payment of an entrance fee of Rs. *10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Members receive the Journal of the Institution, post free anywhere.

Members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and Library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Sergeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 10.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution, on or after the 1st October, will not be charged subscription until the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

*Rs. 7 in the case of British Service Officers serving in India.

Contributions to the Journal.

All papers must be typewritten (in duplicate) and only on one side of the paper. All proper names, countries, towns, rivers, etc., must be in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., para. 204, and King's Regulations, para. 509.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published. Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

THE SECRETARY,

UNITED SERVICE INSTITUTION OF INDIA, SIMLA.

Dear Sir,

I desire to become a Life Member of the United Service Institution of India, and since I understand that no election is necessary in my case, I have filled in the Bankers' order form below.

Yours faithfully,

Name _____

Corps _____

Permanent address _____

Present address _____

Bankers' Order Form.

(Bankers) Messrs. _____

On receipt of this order, please pay to LLOYDS' BANK, COX'S AND KING'S BRANCH, SIMLA, for the UNITED SERVICE INSTITUTION OF INDIA, the sum of Rs. _____, being (* Entrance Fee and) Subscription, and the sum of Rs. 10-0-0 every succeeding January until further notice.

Signature _____

<u>Ordinary Members.</u>		Rs.	s.	p.
* Entrance Fee	--	10	0	0
Annual Subscription	--	10	0	0
Total	--	20	0	0

Date _____

<u>Life Members.</u>		Rs.	s.	p.
* Entrance Fee	..	10	0	0
Subscription	..	120	0	0
Total	..	130	0	0

* Rs. 7 only in the case of British Service Officers serving in India.

MILITARY WIDOWS' FUND, — BRITISH SERVICE —

THIS FUND enables a British Service (Army) officer, by subscribing from Rs. 6 to Rs. 10 per quarter, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 8,775	to Rs. 12,375
For each child	„ 750	to „ 1,125

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription and the sum for each child varies with age of child. Subscriptions are based on the rank of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer, but not in excess of 4 years.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return Home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Headquarters, Simla.

For admission and rules apply to :—

The Secretary,
MILITARY WIDOWS' FUND,
Army Headquarters, Simla.

United Service Institution of India.

PATRON :

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS :

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the United Provinces.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Governor of Burma.
His Excellency the Governor of the Central Provinces.
His Excellency the Governor of Assam.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

MEMBERS OF THE COUNCIL, 1927-28.

Ex-officio Members.

- | | |
|--|--|
| 1. The Chief of the General Staff. | 8. The Master-General of Supply in India. |
| 2. The Adjutant-General in India. | 9. The Engineer-in-Chief. |
| 3. The Air Vice-Marshal, Commanding R. A. F. in India. | 10. The Military Secretary. |
| 4. The Secretary, Army Department. | 11. The Director, Medical Services. |
| 5. Sir Denys Bray, K.C.I.E., C.S.I., C.B.E. | 12. The Director, Royal Indian Marine. |
| 6. H. G. Haig, Esq., C.I.E. | 13. The Director, Military Operations, General Staff, A. H. Q. |
| 7. The Quartermaster-General in India. | |

Elected Members.

- | | |
|--|---|
| 14. Major-Genl. Sir Walter S. Leslie, K.B.E., C.B., C.M.G., D.S.O. | 17. Colonel E. F. J. Hill, D.S.O., M.C. |
| 15. Colonel on the Staff H. C. Jackson, C.B., C.M.G., D.S.O. | 18. Major C. A. Boyle, D.S.O. |
| 16. Colonel M. Saunders, D.S.O. | 19. Squadron Leader E. J. Hodsoll. |
| | 20. D. Petrie, Esq., C.I.E., C.V.O., C.B.E., M.A. |

MEMBERS OF THE EXECUTIVE COMMITTEE, 1927-28.

Elected Members.

- | | |
|--|--|
| 1. Major-Genl. W. M. St. G. Kirke, C.B., C.M.G., D.S.O. (President). | 4. Colonel E. F. J. Hill, D.S.O., M.C. |
| 2. Colonel on the Staff H. C. Jackson, C.B., C.M.G., D.S.O. | 5. Major C. A. Boyle, D.S.O. |
| 3. Colonel M. Saunders, D.S.O. | 6. Major H. I. Allen, D.S.O. |
| | 7. Squadron Leader E. J. Hodsoll. |

Additional Members.

- | | |
|------------------------------------|---|
| 8. Major W. K. Rebsch, D.S.O. | 11. Captain L. Gilbert, M.C. |
| 9. Major S. A. H. Hungerford, M.C. | 12. Captain R. J. Wilkinson, C.B.E., F.R.G.S. |
| 10. Major T. C. E. Barstow, C.B.E. | |

SECRETARY & EDITOR	..BT-MAJOR J. G. SMYTH, V.C., M.C.
SUPERINTENDENT ..	..SUB.-CONDE. J. C. ALFORD.
LIBRARIAN ..	..MISS W. MCCORMICK.
BANKERS ..	..LLOYDS' BANK LIMITED. (COX'S AND KING'S BRANCH), SIMLA.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed inside front cover.
3. The Reading Room of the Institution is provided with all the leading illustrated papers, newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan free. Books are sent out to members V.-P. for the postage.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in any part of the world.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found in para. IV, Secretary's Notes.
7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.
8. When temporarily in the U. K. Officers of the Indian Army can join the Royal United Service Institution, Whitehall, for a period of six months on payment of half a guinea, or for a period of one year on payment of a guinea.

Am
U1
.U5
v. 58-59
1928-29

United Service Institution of India.

APRIL, 1928.

CONTENTS

	PAGE.
Editorial	233
1. A Note on the Economic Independence of the United States	241
2. An Army Air Arm	248
3. The Cardwell System (A reply to a Criticism) ..	251
4. Notes on Appreciations, Instructions, Operation Orders and Message Writing	260
5. An A. F. (I) Annual Camp	288
6. Notes on " Q " Organization for War (India) ..	300
7. Organization of the Indian Army—A lecture delivered at the Army Headquarters Staff College Course, 1927	325
8. Note on Jungle Warfare	338
9. The Source of Disciplinary Authority	364
10. With the XIII Division Signal Company in Gallipoli	369
Military Notes	375
Correspondence	427

REVIEWS.

1. The Great Pyramid and its Purpose	432
2. Napoleon	440
3. Field Marshal Sir Henry Wilson, Bart., G.C.B., D.S.O. His Life and Diaries, Vols. I & II	440
4. Journal of the Royal Artillery, January 1928 ..	441
5. Commercial Air Transport	442

I.—New Members.

The following new members joined the Institution from 1st December 1927 to 29th February 1928 :—

ORDINARY MEMBERS.

Lieut. A. M. Finlaison.	Captain R. J. Tuke.
Wing Commander J. O. Archer.	Captain W. H. C. Rainier.
Captain H. N. Obbard.	Captain A. E. Warhurst.
2/Lieut. R. B. F. K. Goldsmith.	Captain J. N. Soden.
Major W. L. B. Chapman.	Lieut. A. E. Saalfeld.
Captain G. B. J. Kellié.	Captain R. M. Gore.
Lieut. A. C. Cottell.	Captain J. V. Bell.

II.—Examinations.

(a) The following table shows the campaigns on which the military history papers will be set from March, 1928, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii) :—

1	2	3	4	5
Serial No.	Date of examination.	Campaign set for the first time.	Campaign set for the second time.	Campaign set for the last time.
1	March, 1928 ..	Waterloo, 1815 (from the landing of Napoleon in France, 1st March, to the conclusion of operations at Waterloo).	...	Mesopotamia, 1916-17 (as detailed in Army Order 339 of 1926, as amended by Army Order 168 of 1926).
2	October, 1928 ..	Palestine, 1917-18 (from Genl. Allenby's assumption of command, 28th June, 1917, to the conclusion of operations, 31st October, 1918), covered by despatches, dated 16th December, 1917, 18th September and 31st October, 1918, and 28th June, 1919.	Waterloo, 1815 (as given in Serial 1, column 3).	...
3	March, 1929 ..	..	Palestine, 1917-18 (as given in serial 2, column 3).	Waterloo, 1815 (as given in serial 1, column 3).
4	October, 1929 ..	To be notified later.	..	Palestine, 1917-18 (as given in serial 2, column 3).

NOTE.—With regard to Army Order 363 of 1926, the above campaigns will not be divided into general and special periods.

(b) Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1. *The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2. *The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. O. G. Powels).

B.—OTHER BOOKS.

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
 The Revolt in the Desert (T. E. Lawrence).
 Allenby's Final Triumph (W. T. Massey).
 How Jerusalem was Won (W. T. Massey).
 Outline of the Egyptian and Palestine Campaigns, 1914-18
 (Bowman-Manifold).
 L'Attaque du Canal de Suez (Douin).
 Army Quarterly—October 1920 (T. E. Lawrence's article).
 Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T.
 Atkinson's articles).
 Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's
 article).
 Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).
 R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's
 article).
 U. S. I. Journal—October 1923 (Captain Channer's article).

3.—*The Dardanelles Campaign.**Description.*

- | | |
|--|--|
| Naval and Military Despatches .. | A clear account of the operations in detail from the G. H. Q. standpoint. |
| Reports of the Dardanelles Commission. | Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts. |
| The Dardanelles (Callwell) .. | The best account and criticism of the strategic conduct of the campaign. |
| Gallipoli Diary (Sir I. Hamilton) .. | The campaign from the point of view of the C.-in-C. on the spot. |
| Life of Lord Kitchener (Arthur) .. | Throws considerable light on Lord Kitchener's direction of the campaign. |
| The Dardanelles Campaign }
(Nevinson).
Gallipoli (Masfield)
The World Crisis (Winston Churchill.) | Well written and picturesque accounts by eye-witnesses.
Explains his part in inception of the campaign. |

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson). C. I. G. S. From point of view of the
Five years in Turkey (Liman Van Sanders).
Official Account: Official History of the War, Naval Operations, Vols. II and III.
Gallipoli Campaign (Outline of Military Operations). By a Student.
Experiences of a Dugout (Callwell).
Despatches from the Dardanelles (Ian Hamilton).
The Navy in the Dardanelles Campaign (Wemyss).

4.—The Mesopotamia Campaign.

- The Campaign in Mesopotamia, 1914-18 (Evans).
Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).
Critical Study of the Campaign in Mesopotamia up to April, 1917.
Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
The World Crisis (Winston Churchill).
Notes and Lectures on the Campaign in Mesopotamia (A Kearsy).

5.—Waterloo Campaign.

- Waterloo Campaign (J. H. Anderson).
Waterloo (Hilaire Belloc).
Wellington and Waterloo (Arthur Griffiths).
Waterloo the Downfall of the first Napoleon (George Hooper).
Campaign of 1815 (W. H. James).
With Napoleon at Waterloo (E. B. Low).
Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).
Waterloo Campaign (S. C. Pratt).
Wellington and Waterloo (G. W. Redway).
Wellington Campaigns. Peninsula-Waterloo, 1808-1815, also Moore's.
Campaign of Corunna (C. W. Robinson).

6.—*The American Civil War.*

Stonewall Jackson and the American Civil War (G. F. R. Henderson).

History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).

History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).

American Civil War (J. H. Anderson).

The 1st American Civil War, 1775-78 (Henry Belcher).

The American Civil War, 1861-64 (John Formby).

History of the American Civil War (J. W. Draper).

Fredericksburg and Chancellorsville (J. E. Gough).

Battles and Leaders of the Civil War (Johnson and Buel).

War of Secession, 1861-62 (G. W. Redway).

7.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

8.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

A Staff Officer's Scrapbook (Ian Hamilton).

German Official Account.

Lectures on the Strategy of the Russo-Japanese War (Bird).

Question on the Russo-Japanese War (Brunker).

Official Account: The Russo-Japanese War (Naval and Military), 3 Vols., published by Committee of Imperial Defence.

Outline of the Russo-Japanese War (Ross).

A Study of the Russo-Japanese War (Chasseur).

My Experiences at Nan Shan and Port Arthur (Tretyakow).

Outline History of the Russo-Japanese War, 1904, up to the Battle of Liao-Yang, with Questions and Answers (P. W.).

A short account of the Russo-Japanese War ("Footslogger").

An account of the Battle of Liao-Yang (with questions and 10 maps for examination purposes) (Bird).

9.—*The Palestine Campaign.*

The Official History of the Great War—Military Operations in Egypt and Palestine, Vol. I, and Maps (Lt.-General Sir George MacMunn and Captain Cyril Falls).

The Palestine Campaign (Colonel A. P. Wavell).

An Outline of the Egyptian and Palestine Campaigns, 1914-18 (Major-General Sir M. G. E. Bowman-Manifold).

Official History of Australia in the War, 1914-18, Vol. VII, Sinai and Palestine (H. S. Gullett).

The Desert Campaign (W. T. Massey).

10.—*Organization of Army since 1868.*

A.—ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue, Vols. I to XI.

Outline of the Development of British Army, by Major-Genl. Sir W. H. Anderson.

Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

* Notes on the land forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1925.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines, viz., R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc.

10.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas, 1917).

The British Empire Series. (XII volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

* Particularly recommended by the C. I. G. S. for all officers to read.

Forty-one years in India (Lord Roberts).

History of the British Army (Sir John Fortescue).

General Survey of the History of India. (Sir Burney Lovett).

Citizenship in India (Capt. P. S. Cannon).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominions in India (Sir A. C. Lyall, 1894).

A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).

The Nearer East (Hogarth, 1902).

Modern Egypt (Cromer, 1908).

Egypt and the Army (Elgood, 1924).

The History of Canada (W. L. Grant).

Nova Scotia (B. Wilson, 1911).

Report on British North America (Sir C. P. Lucas).

The Union of South Africa (R. H. Brand, 1909).

Short History of Australia (E. Scot).

History of the Australasian Colonies (Jenks, 1912).

The English in the West Indies (J. A. Froude, 1888).

The Lost Possessions of England (W. F. Lord, 1896).

International Relations of the Chinese Empire (H. B. Mosse).
(Kelly and Walsh Shanghai).

Whats wrong with China (Gilbert).

Why China sees Red (Putman-Weale).

Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).

11.—*Military Geography.*

Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).

Imperial Military Geography (Capt. D. H. Cole, 1928).

Introduction of Military Geography (Col. E. S. May).

Imperial Defence (Col. E. S. May).

Main Feature of the Japanese and other Pacific Problems.

(Reprinted from *Morning Post*. Sifton Præd).

Britain and the British Seas (H. J. Makinder, 1907).

Military Geography (Macguire).

Imperial Strategy (Repington).

War and the Empire (H. Foster).

Historical Geography of British Colonies (Dominions), 7 Vols.

(Sir C. P. Lucas, 1906-17)—

Vol. 1, Mediterranean.

Vol. 2, West Indies.

Vol. 3, West Africa.

Vol. 4, South Africa.

Vol. 5, Canada.

Vol. 6, Australia.

Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

12. *Foreign Armies.*

OFFICIAL.

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- Handbook of the Polish Army, 1927.

13. *Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary tactics or the art of war, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 500 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 509, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet black*. No washes or ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be taken away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is now available.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Historical Record of the 110th Mahratta Light Infantry,	1927 1914-18.	..
2. Report on the Civil Air Transport in the West Indies. (Presented by H. M. Stationery Office, London.)	1927	Official.
3. Notes on the Various Arms of the Service. (Presented by Messrs. Gale & Polden, Ltd., London.)	1927	Capt. A. M. Barrett.
4. The Staff and the Staff College .. (Presented by the Oxford University Press, Bombay.)	1927	A. R. Godwin Austin.
5. Imperial Military Geography, 5th edn. (Presented by Messrs. Sifton Praed & Co., Ltd., London.)	1928	Capt. D. H. Cole.
6. All the World's Aircraft .. (Presented by Sampson Low, London.)	1927	G. G. Grey and F. Jane.
7. The Official History of Australia in the War, 1914-18. (Presented by Messrs. Angus Robertson, Ltd., Sydney.)	1927	S. S. Mackenzie.
8. The Star and the Crescent. The Story of the 17th Cavalry.	1927	Major F. C. C. Yeats-Brown.
9. The Palestine Campaigns .. (Presented by the Oxford University Press, Bombay).	1928	Colonel A. P. Wavell.

BOOKS PURCHASED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Sir Henry Wilson's Life and Diaries, Vols. I & II.	1927	Sir E. C. Callwell.
2. Bolshevik Russia	.. 1927	Anton Kralgren.
3. Soviet <i>versus</i> Civilization	.. 1927	Augur.
4. Elementary Economics	.. 1926	Sir Sydney Chapman.
5. The Growth of the Army and the Empire.	1927	..
6. Lombard Street—The Money Market.	1927	W. Bagehot and Hartley Withers.
7. Story of the Battle of Waterloo	.. ..	Rev. R. Gleig.
8. Commercial Air Transport	.. 1926	Lt.-Col. Ivo Edwards, and F. Tymms.
9. War Birds	.. 1927	Diary of an Unknown Aviator.
10. The Revolt in the Desert	.. 1927	T. E. Lawrence.
11. Whitaker's Almanack	.. 1928	..
12. Pegasus	.. 1925	Col. J. F. C. Fuller.
13. Moltke	.. 1921	Lt.-Col. F. E. Whittton.
14. The Truth about Jutland	.. 1927	J. E. T. Harper.
15. The Two Battles of the Marne	.. 1927	Foch, Joffre, Ludendorff and the Ex-Crown Prince of Germany.
16. Chemical Warfare	.. 1921	A. A. Friers and C. West.
17. Citizenship in India	.. 1923	Capt. P. S. Cannon.
18. The Garden of Adonis	.. 1927	A. L. Carthill.
19. Why China Sees Red	.. 1926	Putman Weale.
20. Napoleon	.. 1927	Emil Ludwig.
21. The International Relations of the Chinese Empire, 1834—1911, Parts I, II, III.	1918	H. B. Morse.
22. What's Wrong with China	.. 1926	R. Gilbert.
23. The Origin of the Next War	.. 1926	John Bakeless.
24. You'll be a Man my Son	.. 1927	Jason Gurney.

BOOKS ON ORDER.

<i>Title.</i>	<i>Author.</i>
1. Army and Sea Power	.. Major H. G. Eady and Major R. A. Pargiter.
2. China in Turmoil	.. King.
3. Baghdad and the Story of its Fall	.. Capt. M. Amir Bey.
4. Five Years in Turkey	.. Liman van Sanders.
5. Memoirs of Prince Max of Baden	.. ..
6. The First Flight Across the Polar Sea.	Amunsden and Lincoln Ellsworth.
7. The Beginnings of Organised Air Power.	.. J. M. Spaight.
8. India by Air	.. Sir Samuel Hoare.
9. Navies and Nations	.. Hector C. Bywater.
10. Masters of the War	.. D'Esterre.
11. Customs, Manners and Ceremonies of the Hindus.	Abbe Dubois.
12. The World Crisis by Winston Churchill.	.. A Critical Examination by Lord Sydenham.

IX.—Pamphlets.

The following may be obtained by V. P. P., plus postage, on application to the Secretary :—

- (a) British and Indian Road Space Tables (separately), As. 12 each.
- (b) Diagram of Ammunition Supply (India), As. 4.
- (c) Diagram showing new system of maintenance in the field at Home, As. 8.
- (d) Military Law Paper, questions and answers, As. 4. (As used at the A. H.-Q. Staff College Course, 1926).

X.—Schemes.

Please see the Editorial of this number regarding the issue of schemes. Those now advertised can be obtained by V. P. P., plus postage, on application to the Secretary.

- (B) *Mountain Warfare* Rs. 3.
- (i) Three lectures on Mountain Warfare.

(G) Copies of the recent (February 1928) Staff College Examination papers are available :—

Strategy and Tactics papers (with maps)	.. Rs. 3 each.
Other papers .. .. .	.. Re. 1 ..

(H) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War" .. As. 12 each.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

Prize Essay Gold Medallists.

(With rank of Officers at the date of the Essay.)

- 1872..ROBERTS, Lieut.-Col. F. S., V.O., C.B., R.A.
 1873..COLQUHOUN, Capt. J. S., R.A.
 1874..COLQUHOUN, Capt. J. S., R.A.
 1879..ST. JOHN, Maj. O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., S.O.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry.
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cav., Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
 1899..NEVILLE, Col. J. P. C., S.O.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905..COOKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., R.A.
 1909..MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
 1911..MR. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q.V.O., Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., M.C., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923..KEEN, Colonel F. S., D.S.O., I.A.
 1926..DENNYS, Major L. E., M.C., 4/12th Frontier Force Regiment.
 1927..HOGG, Major D. Mc. A., M.C., R.E.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., V.O., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* *N. B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (specially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894..O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantr. .
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TLBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(*concl'd.*).

- 1910..SYKES, Maj. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
 TURNER, Capt. F. G., R.E.
 KHAN BAHADUR SHER JUNG, Survey of India.
- 1911..LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
 GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..PRITCHARD, Capt. P. P. A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
 WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
 MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..ABBAY, Capt. B. N., 27th Light Cavalry.
 SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
 WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..BAILEY, Capt. F. M., I.A. (Political Department).
 MORSHEAD, Capt. H. T., R.E.
 HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
 ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..ABDUR RAHMAN, Naik, 21st Punjabis.
 ZARGHUN SHAH, Havildar, 58th Rifles (F.F.) (specially awarded a silver medal).
- 1917..MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918..NOEL, Capt. E. W. C. (Political Department).
- 1919..KEELING, Lt.-Col. E. H., M.C., R.E.
 ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920..BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
 AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..HOLT, Major A. L., Royal Engineers.
 SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
 NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
 SOHBAT, Head Constable, N.-W. F. Police.
 HARI SINGH THAPA, Survey Department.
- 1924..HAVILDAR RAHMAT SHAH, N.-W. F. Corps.
 NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..SPEAR, Captain C. R., 5/13th Frontier Force Rifles.
 JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..HARVEY-KELLY, Major C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927..LAKE, Major M. C., 4/4th Bombay Grenadiers.

The Journal

OF THE

United Service Institution of India.

Vol. LVIII. APRIL, 1928 No. 251.

EDITORIAL.

The decisions of the Home and Indian Governments with regard to the Skeen Committee report have now been made public.

It has been recognised that a further degree of Indianisation is necessary but it is stated emphatically that there must be no diminution in the efficiency of the Army in India and that there must be no breakdown in the supply of British recruits to the commissioned ranks of the Army.

The initial recommendations of the Committee that the number of direct vacancies at Sandhurst open to Indians should be increased from 10 to 20 a year have been accepted and 5 to 10 vacancies a year in addition are to be reserved for Viceroy's commissioned officers. Indians are also to be eligible for cadetships at Woolwich and Cranwell with a view to the formation of Indian artillery, engineer and air units.

As regards the further expansion of vacancies, the Government could not accept the Committee's proposals for an increase by a time scale from the years 1929 to 1952, irrespective of whether efficient and suitable candidates were forthcoming. Nor was the Committee's recommendation for the abolition of the 8 unit scheme, initiated by Lord Rawlinson, accepted.

The main points are, therefore, that Indianisation is to be confined the 8 units already in process of being Indianised—newly joined British officers being posted to non-Indianised units—and that Indians will get more vacancies at Sandhurst—provided, of course, that suitable candidates, up to the required standard, are forthcoming to fill the extra vacancies.

After every great war in history there has been a not unnatural revolt against the use of armed forces and a most worthy desire to abolish war for ever. This has generally found expression in the cutting down of standing armies to extreme limits and in a general desire to enter into treaties and agreements which may make war impossible.

The foundation of the League of Nations after the last and greatest war in history has been a step further in this direction than has ever been made before and the question of world disarmament has recently been strongly urged by some of the larger nations. No nation is more desirous for peace than Great Britain but, with the responsibility of the defence of a large Empire on her shoulders and in view of the absolute necessity for keeping open the trade routes to feed her population, which could only exist on the food resources of the country for a few weeks, it behoves her to examine any proposals for general disarmament with the greatest care, before surrendering one iota of that security which is so vital to the existence of the country and the continuance of the Empire.

Her armed forces have already been reduced to limits which, in the opinion of many, transcend the margins of safety.

History disclosed the frailty of human nature with regard to war and it is remarkable, even now, how soon the memory of the last great war is fading—especially among the younger generation who did not really realise the suffering it caused throughout the world.

It has been generally spoken of as “a war to end war” but it is significant that, since 1918, we have not had one really peaceful year in spite of the general war weariness of Europe and the heartfelt desire of all nations for a period of peace at any price for recuperation and stabilisation.

There have been various conflagrations in the Balkans, revolutions in China and in Bulgaria, while in August 1923 the Italian bombardment of Corfu tested the world's new instruments of peace to the limit. There have been revolts in Brazil and Georgia and a war in Morocco.

The desire for world peace and for the reduction of expenditure on armaments generally is as strong in Great Britain as in any country in the world but very safe guarantees of reciprocity would be required before she could proceed much further in disarmament than she has done already.

The Royal Air Force have suffered a serious loss in the death of Flight-Lieut. Kinkead while attempting to create a new flying speed record in the Solent.

Flight-Lieut. Kinkead had a very distinguished war record and young officers of his stamp can ill be spared.

The death roll of airmen engaged in experiments of various sorts is becoming a long one but, for almost every great advance in knowledge, such prices have had to be paid.

It cannot be said that we have yet attained complete mastery of the air—or anything approaching it—but such great strides have been made in a comparatively short period of years that we have every reason to suppose that air transport will become as common, and almost as safe, as road transport, within the lifetime of some of the present generation.

The value of an efficient air transport service to a great Empire such as ours cannot be over-estimated but, in the pioneer stage of air mastery, a certain number of casualties cannot be avoided.

* * * * *

Sympathy must be felt for the Navy for the manner in which a not very important incident in the course of the discipline of the Fleet was represented in large headlines in the Press as “ mutiny ”, “ revolt ” etc., without any attempt to discover whether there was any authority for such statements. Having once adopted this alarmist attitude it was continued throughout the Court-martial, every smallest detail being described and press photographers being in close attendance.

We are living in an age of sensationalism when everyone appears to be out to create records, and if there is no sensation forthcoming then one has to be created. A more reasoned attitude might, however, have been expected on a rather domestic matter of Naval discipline.

Discipline in the Services generally is always a subject of argument and discussion among civilians. The importance of every little detail of discipline is only understandable to those who have to lead men into dangerous places in war, where the spirit may be as unwilling as the flesh is weak, and it is only discipline and training which keeps them going. It is greatly to the credit of the British soldier of to-day that his general discipline and behaviour is so high, compared with that of the soldier of 100 years ago when the penalties for misbehaviour were so much more severe.

Considerable interest has been aroused, and a certain amount of surprise occasioned by the abolition of the death penalty for certain offences on active service. There have always been many advocates for the abolition of the death penalty—generally people who are unable to realise the extreme importance of discipline and control, under circumstances where both are apt to go by the board and the last attempt to do away with the death penalty was made not long ago in the House of Commons and was defeated by a fairly large majority.

The Government have, however, now decided that the time has come for its abolition—in certain cases only.

* * * * * *

Several articles have been received of late on the subject of the difficulties of fitting into the recognised training periods in India all the necessary instruction in accordance with Training and Manœuvre Regulations, and it is regretted that lack of space has forbidden the publication of most of them.

“Training and Manœuvre regulations” states that “The object of individual training is to prepare the individual for the duties which he will be required to carry out in war” and “Individual training is an essential preliminary to collective training and the more thorough the individual training has been the more satisfactory will be the subsequent collective training.”

Full and thorough individual training is more essential for the Indian soldier than for the British but, although facilities for collective training are much greater in India than in England, the difficulty of fitting in an adequate period of Individual training for the sepoy of the Indian Army is far greater than in the British Army.

The Individual Training season in India begins on April 1st and ends on October 15th. The beginning of the Individual Training season coincides with the opening of the leave season and, through out the hot weather, so many men are away on leave that, in stations where duties are heavy, a thorough system of individual training is almost impossible.

In an army recruited mainly from the cultivator class a long period of summer leave is necessary.

The opening of the Collective Training season should see the individual thoroughly trained in all his duties so that the tactical training of sub-units can commence at once, to be followed progressively by battalion and brigade training and manœuvres.

In India, however, owing to difficulties of weather and crops, manœuvres often have to take place before Xmas, which may involve an unduly hurried collective training period and then rather a blank time between the end of manœuvres and the official commencement of the next Individual training period.

These difficulties of leave, weather and crops are patent but unavoidable and can really only be overcome, in cases where manœuvres have to take place so early, by fitting in as much unit training as possible into the three good cold weather months after Xmas.

In cases where weather and crops permit, the ideal would appear to be to concentrate on platoon, company and battalion training before Xmas, giving January for higher training and leaving February and March to supplement the short hot weather period available for individual training.

* * * * *

Since the publication of the last Journal two important changes have taken place in British Cavalry organization and equipment. One is the abolition of the lance as a weapon of war and the other is the abolition of the Hotchkiss gun—with the possible exception of the retention of two guns per regiment for Anti-Aircraft purposes.

One cannot regard the passing of the lance without a thought of regret—its abolition really brings home to one the passing of the last shreds of the glamour of war and the advent of the cold efficiency of the machine. The decision to abolish the lance produced the expected amount of criticism and discussion by its supporters in the Press. The history and the prowess of the lance throughout the ages and its moral effect, by no means altogether absent in the last war, were related at length and were of considerable interest.

There is no doubt that the moral effect of the lance, particularly against an uncivilised enemy, is much greater than that of the sword. On the other hand it is more conspicuous, heavier, and more unwieldy.

Indian lancer regiments will continue to be armed with the lance, which has many successes to its credit in frontier affrays.

The abolition of the Hotchkiss gun followed logically on the reorganization of a British Cavalry regiment into two sabre squadrons and a machine gun squadron with an increased number of Vickers guns.

The Hotchkiss gun has also been abolished in India.

* * * * *

The past year has seen the passing of several of the leading figures of the Great War, both military officers and civilians.

The strain of the war years for those in positions of responsibility and high command must have been intense and is only just being fully realized.

The outstanding loss from the point of view of the Army is that of Earl Haig whose funeral procession was one of the most impressive sights seen in London for many years.

It is extraordinary how the Nation's debt to him was only appreciated fully after his death. He was not a seeker after popularity, nor person of magnetic personality who would appeal to the imagination of the crowd, but his quiet determination, invincible optimism and physical strength and fitness to withstand such a continued strain of chief command were a tremendous asset to the British Army, in the greatest struggle it has ever taken part in.

It is not generally realized what an enormous army he commanded compared, for instance, with the small British army commanded by the Duke of Wellington at Waterloo.

His chief difficulties must have been the very close touch with his Government, owing to the excellence of modern communications, and the inevitable strain of co-operating with several allied commanders-in-chief in their own country over a long period of operations.

In Sir Henry Wilson's book it is most marked that, in all the schemings for advancement or for additional powers and authority, Sir Douglas Haig is never concerned. He went on his way imperturbably to carry the war to a successful conclusion so far as it lay in his power, and when the question of supreme command became a vital issue he was content to subordinate himself to the French Commander-in-Chief.

His book, which, it is understood, is to be published in 10 years' time will be awaited with the greatest interest and will undoubtedly be a very valuable addition to the history of the Great War.

* * * * *

A short time ago the Institution put on sale a certain number of tactical schemes drawn up with the object of assisting officers working for the Staff College and Promotion examinations.

These schemes, which are advertised in the Secretary's Notes at the beginning of each Journal, have been in great demand but there have been so many small changes in the regulations with regard to order writing, etc., during the last two years that some of these schemes are not quite up-to-date. These have therefore been withdrawn from circulation until they can be corrected. There are still, however, a certain number of schemes available (*vide* Secretary's notes in this number) and the schemes used on the forthcoming Army Headquarters Staff College Course will also be available in August.

* * * * *

The value of pigsticking from the point of view of military training and the development of those qualities of courage and speed of thought and action which are so essential for the officer, has been commented on previously in these columns and a recent journal contained an interesting account of last year's Kadir Cup.

In his introduction to the first edition of "The Houghunters Annual" His Excellency the Commander-in-Chief emphasises the value of "one of the finest sports in the world" and wishes this new journal all success.

The first edition of what, we hope, will be a flourishing publication, is of the greatest interest and says much for the zeal and initiative of the two co-editors whose names are well-known to all pigstickers in India. It contains forewords by Sir Robert Baden-Powell and Major-General Wardrop and includes summaries of the doings of the well-known tent clubs of India and many interesting articles, both historical and instructive, on pigsticking generally.

In these days of inflated prices for polo ponies it is difficult for the man of small means, not in a cavalry regiment, to get much of a look in at polo in a big station and, if he is likely to be in the neighbourhood of a good pigsticking country, he will probably find that this form of sport will give him the best fun for his money.

A moderately good pigsticker can be obtained far cheaper than the average tournament polo pony and, although it takes much practice and experience to become a really good hunter and killer of pig, the beginner will find that, by watching the experts, he will soon become sufficiently proficient to obtain a great deal of pleasure and very fine exercise from hunting the boar.

Pigsticking in India is undoubtedly on the upward grade and "The Hoghunters Annual" should be in the possession of every pigsticker.

* * * * *

Three recent sporting events of note have taken place at Home which have been followed with the greatest interest by all those interested in sport in India.

The first is England's victory in the Rugby football championships after one or two rather lean years. She won all her international matches and has laid the foundations of a young back division which should develop into a brilliant combination in the next few years.

The second event of note is the Grand National, with only two horses finishing and a 100 to 1 chance cantering in alone. One advantage of living in India is that one has the amusement of reading the forecasts for the race after the event instead of before. The Indian papers had come to the conclusion before the race that it was quite impossible for anything but one of five horses to win—and not a word of apology was given when they all fell by the wayside early in the race! If Grand National form could be estimated so accurately it would not be what it is—one of the most open and sporting events in the world.

The overwhelming victory of Cambridge in the boat race, following on their continuous victories in this and almost every other form of sport for the past few years, have given supporters of Oxford furiously to think.

Detailed accounts of the race have not been received up to the present, but much has been made of the exhaustion of the Oxford crew at the finish compared with the freshness of Cambridge, the conclusion being drawn that Oxford were not properly trained. This, however, does not follow at all as, in any competition where one team is outclassed—as Oxford apparently were—the losers take much more out of themselves than the winners.

Success in sport at the universities certainly generally goes in cycles, but Oxford's cycle should by now be overdue.

* * * * *

The Army Headquarters Staff College Course will be held in Simla from July 16th to August 10th.

A NOTE ON THE ECONOMIC INDEPENDENCE OF THE UNITED STATES.

BY

CAPTAIN D. H. COLE, M.B.E., A.E.C.

The foreign policy of a nation is largely dictated by its economic needs. The United States, possessing vast territories of almost incredible richness in agriculture, minerals and water power, sparsely inhabited in comparison to the countries of Western Europe has been able for a century and a half to maintain its economic independence of foreign products to an extent impossible in Europe. It has had the further advantage of a continental position with all the advantages of insularity—an insularity attained by 3,000 miles of sea in one direction and 6,000 miles in another. These two factors of economic and strategic independence have led to the careful maintenance of the famous Doctrine of Isolation defined by Washington in his farewell address to his fellow countrymen :—

“Europe has a set of primary interests which to us have none or a very remote relation. Hence she must be engaged in frequent controversies, the causes of which are essentially foreign to our concerns. Hence, therefore, it must be unwise in us to implicate ourselves by artificial ties in the ordinary vicissitudes of her politics, or the ordinary combinations and collisions of her friendships or enmities. Our detached and distant situation invites us to pursue a different course....” “is our true policy to steer clear of permanent alliances with any portion of the foreign world... Taking care always to keep ourselves by suitable establishments or a respectable defensive posture, we may safely trust to temporary alliances for extraordinary emergencies.”

The object of this brief note is to suggest that there are certain economic factors at work in the United States which must play a gradually increasing part in weaning that country from the Doctrine of Political Isolation. Other factors leading to the same end, such as the shrinking of the world owing to the speeding of communications will not be considered.

It has frequently been said that “import trade for the United States is only the dessert on top of a good meal.” This statement, almost absolutely true thirty years ago, requires to-day some analysis and criticism. It cannot be accepted as completely correct even in

regard to the import of raw materials, quite apart from the vast quantity of manufactured imports required by a large population living up to the high standard of the American public.

These raw materials required by the United States may be divided into three categories :—

- (1) Raw materials which are produced in sufficient abundance to meet the needs of the United States, without the necessity of foreign supplies.
 - (2) Raw materials which are produced in great but not sufficient quantities.
- The production of these in time of war might be stimulated or requirements diminished by economy or rationing to make the country self-sufficient.
- (3) Raw materials produced only in trivial quantities, quite insufficient for the country either in peace or war.

In the first category the United States is peculiarly fortunate. She is the world's most important producer of 13 of the chief minerals, in which are included coal, iron, copper, lead, zinc, silver, petroleum, natural gas, phosphate and salt. She produces $\frac{2}{3}$ of the world's commercial cotton, $\frac{1}{3}$ of the world's supply of iron ore, $\frac{6}{10}$ of the total production of copper, $\frac{7}{10}$ of the total production of petroleum and $\frac{1}{3}$ of the entire tobacco crop. She grows enough wheat to feed her own people and have a surplus—gradually diminishing—for export. Almost all the helium obtained in the world comes from Texas.

In the second category perhaps the most important commodity is sugar. In spite of a great production of cane sugar in Louisiana, of beet sugar from the various Mississippi States and of large quantities of syrup obtained from Indian corn the United States is not self-supporting in this respect. Imports of sugar from Cuba, Hawaii and other countries amount to a value of £ 50 millions annually. Hides and skins and the substances, such as hemlock, used in their tanning are imported in large quantities. Half of her requirements of wool are obtained from the great wool producing countries, such as Australia. Potash and nitrates, though efforts were made during the War to stimulate production, are still largely imported. Even timber, once so lavishly provided by nature, has been squandered and much of the supply now comes from Canada. "Ten thousand tons of newsprint paper per day are now used in the United States and our forests can

supply only a part of the pulp. We depend on Canada and Northern Europe for the medium of our daily knowledge of the world. We are still burning up our flax fibres, straw, corn stalks and waste paper and leaving to decay better logs than on the average go to a British sawmill.”*

The third category contains a number of commodities, some of which are of vital importance. The American is a coffee drinker and consumes almost 10 lbs. of coffee per head each year. More than three quarters of the amount required is imported from Brazil. The United States produces $\frac{2}{3}$ of the manufactured rubber in the world, but $\frac{9}{10}$ of the total supply of raw rubber is controlled by British capital and mostly produced in British territory. The United States is therefore definitely dependent in this respect. Further, she uses 75,000 tons of tin annually in her motor and canning industries, but only produces $\frac{1}{500}$ part of this quantity. The balance comes chiefly from the Malay States and in smaller amounts from Bolivia. Her requirements of nickel are supplied entirely by Canada. Manganese ore which is essential in steel making is almost completely imported. Chromite and Tungsten, necessary for high grade steels and munitions can only be produced at an uneconomic cost and are obtained from Rhodesia, New Caledonia and Burma. Like Great Britain she is dependent on Russia for Platinum and on Greenland for Cryolite, the essential flux for the production of Aluminium.

It is therefore obvious that there is a considerable degree of dependence in relation at least to the commodities in the second and third categories. It should be observed, however, that this dependence is greatly lessened if the American Continent as a whole is considered. Coffee and rubber from Brazil, tin from Bolivia, nickel and timber from Canada, sugar from the West Indies, hides and skins from the Argentine could provide the chief wants of the United States. There is thus an economic basis for the policy of Pan-Americanism, and for the gradually widening interpretation of the Monroe Doctrine to include financial control over Central and South American States. The dangers arising from this economic dependence and from a desire for markets is that “America for the Americans” may tend to mean “America for the United States.”

*American Dependence on Foreign Products. Professor A. P. Brigham, Geog. Journal, May 1924.

The present condition of affairs is being complicated and modified by two factors :—

- (1) The industrialization and urbanization of the United States.
- (2) The rapid growth of population.

“In 1860,” says Professor Morrison of Haward, “the average American was a yeoman farmer : since 1900 he has been an employee. In 1865 only certain parts of New England and the Middle States had been industrialised, American technique in general was inferior to that of Great Britain and labour combination was making a fresh start. By 1900 industry had captured the Middle West ; agriculture, itself transformed, had conquered the Great Plains ; the United States had become the greatest iron and steel producing country in the world.”* Manufacturing and industry, by 1900, were definitely gaining an ascendancy over agriculture. This is a process with which we are unpleasantly familiar in England. Once started it grows like a snowball. The city and town populations expand at the expense of or, at any rate, more rapidly than those of the country districts. The appearance of the land changes. The proportion of food production to non-food-producers decreases. Sometimes the call of the cities draws like a magnet and land once cultivated goes back into pasture.

This process is going on in the United States. In 1890, 36 per cent. of the population lived in towns of over 2,500 : in 1910 this had increased to 46 per cent. ; in 1920 to 51 per cent. and it is expected that the census of 1930 will reveal over 60 per cent. of the population as urban. Further, it is estimated that since 1920 the total acreage of farms has decreased by 28 million acres.† On the other hand manufacturing has, of course, enormously increased. Between 1900 and 1926—to take only one illustration—the American production of pig iron has risen from 14 to 37 million tons a year. In Great Britain in the same period it has remained practically stationary. Markets for manufactured goods are becoming absolutely essential to this growing industrial organism. South America, the Latin American States and the Far East are the most obvious customers ; and thus the United States from another economic angle finds herself in close relations with the South American and Latin republics, with China

* History of the United States (Oxford Univ. Press), 1926.

† Statesman's Year Book, 1927.

India and the countries of the East, and in competition with Great Britain, Germany, Japan and other industrial nations already partly in possession of these markets. The United States demand for "The Open Door" in Asia while maintaining a policy of the "Shut Door" in the States is an evidence of this economic trend.

To complicate still further the growth of industrialism and urbanization there is the rapid growth of population. The census of 1900 gave the United States a population of 76 millions, that of 1910, 92 millions, and this had further risen to 106 millions in 1920. The population is increasing at an average of $1\frac{1}{2}$ millions per year. Even if this rate be substantially reduced the population in 1950 will be at least 150 millions and in 2000 A. D. it will be 225 millions. Professor Raymond Pearl of Baltimore, however, contends that the increase will not be so rapid. He predicts a flattening of the population curve as the country approaches saturation point, and says that the population will not reach the 200 millions mark until 2100 A. D.* On the other hand that the increase suggested is far from remarkable under circumstances of industrialization will be realized by a comparison with the population of Europe which under no more favourable conditions increased from 180 millions in 1800 to 450 millions in 1910. (*Fueter, World History 1815 to 1920*).

At the present time only one-eighth of the agricultural land in the United States produces the farm products exported abroad. Assuming the present rate of increase of population, long before 1950 this available surplus will have ceased to exist. Even though marshes are drained, deserts irrigated, and power agriculture displaced by the intensive farming of the old countries it is calculated that before the end of the century the United States will be, on a considerable scale, a food importing nation. This is likely to be further intensified by that movement of population to the cities and towns which has already been noticed. As this process continues and the Negro becomes urbanized labour for the cotton plantations in the South will become scarce. Indeed symptoms of this have already arisen. The United States will thus, during the 20th century, repeat the process which between 1750 and 1850 changed Great Britain from a self-supporting land to one dependent for many of her necessities of life partly on overseas trade. Further, this period may coincide with the end of the present enormous output of petroleum which is one of

*The Biology of Population Growth, R. Pearl (1926).

the corner stones of American commerce. The lavish production of petroleum cannot indefinitely be continued. In September 1926 the United States Federal Oil Conservation Board estimated the reserves of oil in proved areas in the United States as only some six years' supply. Other authorities predict a serious shortage in less than 30 years. After that, they say, expensive methods of obtaining the petroleum by water or gas pressure will have to be resorted to, or the United States must fall back on her great reserves of oil shale and obtain it by the costly method of mining and distillation. Long before this stage is reached, unless some substitute for petrol has been discovered she will, by economic pressure, be compelled to import from those lands where petroleum still gushes up "free" from the earth. At a time when she has begun to import agricultural produce she will also have lost her natural lead in the petroleum market. It is symptomatic of this probability that American oil companies are seeking concessions in Asia Minor, South America and Portugese West Africa. It is also symptomatic of it that the United States after the treaty of San Remo demanded a part in the production of the future Iraq oil fields, and eventually obtained for American companies 25 per cent. of the shares in the Turkish Petroleum Company which is prospecting and working those fields. Thus by the mere danger of future economic dependence in connection with this commodity the United States is being already entangled in the web of foreign affairs.

The trend of economic events outlined in the preceding paragraphs suggests a number of important conclusions. The first of these is that the United States is already definitely dependent on foreign sources for a number of vitally important commodities. These commodities could, however, nearly all be obtained in some part of the American Continents. Hence there is a strong incentive to the United States to try to achieve that union—economic if not political—of all the American countries under her leadership, which would be the fully ripened fruit of Pan-Americanism.

The second conclusion is the growing dependence of the United States owing to rapid industrialization and growth of population on markets abroad and on imported raw materials for her factories. This dependence as it increases will be accompanied by a corresponding necessity for the security of her lines of sea communication to every

part of the world. In this respect her interests will be the same as those of the British Empire—the absolute security of sea-borne trade in peace and war.

The last conclusion is not the least important. At present a little less than 40 per cent. of the overseas commerce of the United States is carried in American ships. In spite of the enormous development of tonnage in the American mercantile marine during the War, since the year 1923 there has been a progressive decrease in the American owned tonnage entering American ports. Great Britain alone carries as much of the trade from the United States as do the ships of that country. Further, there has been a decrease in the tonnage under construction in the United States. In 1927 only 100,000 tons of shipping were being built, a remarkably small figure in comparison with more than 1 million tons under construction in Great Britain. It is extremely unlikely however that this condition of affairs can be permanent. It is the effect of the process of internal development which has absorbed the energy of the nation on internal affairs to the exclusion of almost everything else. Prior to the Civil War the United States was becoming a serious rival to Great Britain as the Pickford of the seas. Her vessels came in large numbers to India and the Far East. Her clipper ships of the 50's, which by their beauty and their speed left our shipbuilders breathless captured much of the China tea trade. From the American Civil War onwards to the Great War the settlement of the empty lands of the Middle West and West, the building of railways, the intensive development of industries and trade were the immediate needs. Now that this process has given way to industrialization on a vast scale it is unlikely that the United States will not once again develop a great mercantile marine. No argument from the ground of racial propensities can be urged against such a development, and economic needs would appear to point in that direction.

AN ARMY AIR ARM.

BY

MAJOR E. J. STROVER, 3/20TH BURMA RIFLES.

There is a wide spread feeling in the army to-day that it should possess its own Air Arm. The desire for it has been considerably increased and more boldly expressed since the navy has obtained control over its own Fleet Air Arm.

No responsible army officer wishes to abolish the Air Ministry and Air Staff and to divide the whole of the Royal Air Force between the navy and the army. The necessity of an Air Force to win the Air War is thoroughly realised to-day. To return to the system of the Royal Flying Corps and the Royal Naval Air Service of 1915 with its competition, friction and waste, and without any real co-ordinating authority is rightly regarded as impossible. The only demand is that the Army Co-operation Squadrons should be a part of the army, or at least as much under the control of the army as the Fleet Air Arm is under the control of the navy.

It may be useful to examine the soundness of such a policy. In order to discover its soundness one must give decisions on two questions :—

1. Is it necessary ?
 2. Is it practicable ?
- (1) *Is it necessary ?*

There can be no question that it would be a considerable advantage to the army to possess its own Air Arm. A general can make more use of a squadron of aeroplanes if it is completely under his command than if it is merely co-operating with him. Cavalry, artillery, infantry, armoured cars and tanks will co-operate more easily with pilots who belong to the same service and wear the same uniforms. The army officers will feel secure that the pilots of aircraft who have trained with them in peace, will not be taken away from them in war.

There is one point, however, which is not generally realised in the army. It is not necessary for the pilot of an army co-operation aeroplane to have been trained in the army. The result of fourteen years' experience of the Royal Air Force has proved beyond doubt that no man can make deductions in the air. The pilot of an aeroplane can only see a portion of the enemy's troops. To make deductions of the enemy's dispositions from the position of such troops

as happened to be exposed to his view when he flew over them, is extremely dangerous and likely to mislead the army commander. The only man who can make deductions with any reasonable certainty is the staff officer on the ground who receives information from all sources, not from one aeroplane only but from several aeroplanes, from cavalry, infantry and armoured cars.

For this reason pilots of army co-operation aircraft are taught to report exactly what they see and to surmise nothing.

Twice on manoeuvres in England in 1925, an army staff officer was flown over the enemy, saw a few troops and made deductions from what he already knew. His general, naturally biased in favour of the opinion of his own staff officer, made his own dispositions to his cost.

The pilot of an army co-operation aeroplane is trained to observe accurately and to report accurately. Previous training in the army may be useful in training himself to observe troops from the air but he must overcome his natural tendency to make deductions.

The advantage to the army, therefore, in having its own Air Arm, is not so much that previous training in the Army is advantageous to a pilot, but that a general could exercise better control, that army and air officers could work better together and, greatest of all, that army co-operations pilots would remain with the army in peace and in war. Such advantages may be greatly neutralized if the Air Force will place army co-operation squadrons under the command of the army on the outbreak of war and will leave their pilots with their squadrons.

From the above it appears that it would be a considerable advantage to the army to possess its own Air Arm, but that it is not a vital necessity.

The second point to consider is :—

(2) Is it practicable?

The personnel of the Fleet Air Arm now consist of naval ratings and the pilots are almost entirely naval officers. Recruitment of officers for the navy is easier than for the army, especially since the former have thrown their doors open to the public schools. There is practically no competition for Sandhurst. If the army created its own Air Arm it is very doubtful if sufficient officers could be obtained for it. It is certain that no officers could be spared from the Indian

Army. It is unlikely that the Army Air Arm would be likely to attract boys who now go to Cranwell. The spirited youth who enters Cranwell now, often against his parents' wishes, will prefer to serve in the Royal Air Force.

It is probable, then, that the army could not find sufficient officers for its Air Arm.

(3) Finally let it not be supposed that the navy, by possessing its own Air Arm, has gained much and lost nothing. It has sacrificed much of the good feeling and anxiety to co-operate, which formerly existed between the Navy and the Air Force. Co-operation between these two Services is even more necessary now than it ever was.

In almost any conceivable future war, the navy will require the co-operation of shore-based aircraft, of flying boats and of floatplanes (still in the hands of the Royal Air Force), and if co-operation is then no better than at the present time the navy will have lost more than they have gained.

Co-operation between an Army Air Arm and the Air Force, in anything except a small war, would be more important. An Army Air Arm will be unable to function unless the Royal Air Force can secure it from hostile air attack. For this reason the army must be careful how it follows the lead of the navy. To lose any of the good feeling and co-operation which exists between the army and the Air Force to-day would be to lose more than would be gained by the establishment of an Army Air Arm.

Co-operation between different Services is not natural to British Officers. The British Officer is naturally individualistic and his public school training teaches him to be loyal to his own particular crowd while regarding the other crowd with tolerant and good natured contempt. Co-operation between the Services must be assiduously cultivated and nothing which is gained must ever be lost.

(4) In view of the present dearth of officers, it would, therefore, appear most unwise to attempt to establish an Army Air Arm, especially since this arm is not vitally necessary. When the supply of officers for the army enables this experiment to be made, the greatest care must be exercised to see that, in gaining an Air Arm, we lose nothing of that co-operation which is vitally necessary for both Services.

THE CARDWELL SYSTEM.

By

LEE-ENFIELD.

(A REPLY TO A CRITICISM.)

An interesting *article appeared in the R. U. S. I. Journal of August this year on the Cardwell system, criticizing it and generally condemning it as no longer suited to our national requirements. Some of the sentiments expressed were, to an infantry officer, of so startling a nature that it was necessary to turn back to the beginning of the article to ascertain whether it could have been written by one of his own branch of the Service. This proved not to be the case, but constructive criticism is always useful and often of inestimable value. The article must therefore be considered in detail.

The writer pointed out that Cardwell's reforms, as amended by Haldane in 1907, had stood the test of two "wars of consequence". It will be readily agreed that this is no overstatement of the case. It has provided the basis of our army organization for nearly sixty years, including periods of profound peace and devastating war. It has witnessed inflation on an unprecedented scale and corresponding deflation. It produced a large Army Reserve efficient and available, thus combining strength with economy. It put into the Field, or at least prepared in peace, over eight divisions of regulars and fourteen divisions of Territorial troops complete in all arms, the result of the sorting out and re-organization of the old Volunteers. The system of expansion by the Militia, never a success, was thus definitely abandoned in favour of the Territorial Force. It was recognized that it would be impossible to put Militia up against first line troops of an European enemy. It established the Territorial System, which has since been extended, and now links all regular battalions, their depots and their Territorial brothers-in-arms. The system provided an expeditionary force, not only of unprecedented efficiency but of a size which met the original requirements of our allies.

Thus, the Cardwell System has much to its credit. Of course it may be argued that the original British Expeditionary Force was ludicrously inadequate to the task before it, that the Territorial Army was only for Home Defence, that the size of the problem was hopelessly under-estimated. It would however, be laying oneself open to the charge of "being wise after the event" if one seriously suggested

* The Cardwell System. A criticism. By Captain G. L. Appleton, R. A.

that in 1914 an organization for a force of seventy divisions was necessary, or that the Territorial Army should be available for service overseas, or that Universal Service should have been introduced. Such stupendous changes would naturally only be adopted by the nation in times of the gravest crises. Let us therefore come down to the detailed criticism before us of the Cardwell System. Boiled down to its essentials it seems to be as follows.

The system is obsolete, inadequate and inelastic, not fitted to our present day requirements, it subordinates our war strength to that of our Imperial peace garrison necessities, endeavouring to meet the contradictory requirements of both these demands. It has failed to produce a homogeneous army, and results at times in either colonial or home stations being over-garrisoned. It broke down in the Great War and experienced drastic alteration made inevitable by the existence of regimental water-tight compartments for providing officers, reinforcements, etc. It depended for its success on regimental *esprit de corps* which was either to some extent artificial or else replaced by Divisional *esprit de corps*; and finally in peace time it has resulted in glaring inequalities of promotion particularly amongst officers owing to the small size of the regimental unit.

A damning indictment and sufficient, if established, to go a long way towards securing the abolition of the system however well it has functioned in the past. The writer further points out that "Splendid isolation" is no longer possible, that we must consider the possibility of intervention in an European war in view of our increased liability to attack, notably from the air, and, in short, that the facts must be faced.

He puts forward certain specific recommendations as remedies for the serious shortcomings which are detailed above. These may be summarized as follows:—

- (a) The arrangement in large groups, *e.g.*, Wessex, Highland, Northumbrian, etc., of all infantry regiments with one large depot for each group.
- (b) The placing of all officers on, either, group lists or on one common list for promotion, in the same way as officers of the R. A. and R. E. The same method to be applied to cavalry. All officers to be promoted within their group and take their turn at service overseas.

- (c) Depots to send drafts to India, etc., as required. If Indian and Colonial establishments vary from Home establishments reinforcement and replacement to be made by means of drafts, the units remaining overseas.
- (d) Depots to train recruits for the regular army, but in war all recruitment to be taken over by a National Association. Depots thereafter to train recruits for regular units, and "maintain" Territorial Army units.

The critic is of the opinion that *esprit de corps* can be produced at short notice, that some of the tradition which has gathered round units' names is artificial, and that less than five per cent. of the unit take any great interest in their regiment's history, that touch between regulars and territorials from the same county is negligible, and that the extinction of the territorial principle would therefore be little felt.

These recommendations, whatever else may be thought of them, have the advantage of being for the most part definite, but before we can consider them we must discuss the premises on which they are based.

The critic claims that as regards preparation for war the present state of International affairs resembles that of 1870 rather than that of 1914. It seems therefore that we have by the writer's admission returned to the *status quo* and that other things being equal, the Cardwell System which was designed to meet the needs of the former period should still be suitable to our present necessity. On this point the writer's remark that we cannot return to our policy of Splendid Isolation is somewhat misleading. To-day, as in 1914, or indeed in 1870, we could not risk the danger of the Channel ports being in the hands of a definitely hostile power. That danger is only in degree greater than it was sixty years ago.

The Cardwell System was based on the fact that our requirements in peace overseas were roughly equal to the Home garrison, which Haldane formed into an expeditionary force for use in national emergency. This rough and ready rule has been found not unsuitable in the past though difficulties have arisen at times. It has yet to be proved unsuitable to present conditions. At times, as our commitments abroad have varied, our overseas garrisons have risen or fallen in strength. The ever-growing self-dependence of our Dominions has lightened our load in one direction and our new responsibilities

in acquiring the possession or the mandate over undeveloped lands, has, on the other hand, increased it. On the whole the tendency is steadily towards a decrease, any move in the other direction being usually of a temporary nature. The makeshift of regarding Gibraltar, the Rhine, etc., as Home stations has bridged several awkward gulfs and the disbandment of various units has prevented the army from remaining in excess of absolute necessity. The system may be regarded as adequately elastic though not ideal. As already stated, it produced an expeditionary force of a strength sufficient to satisfy our Allies' demands in 1914. Though reduced in strength it presumably still does so. It cannot be contended therefore that it does not produce an adequate army either in peace or war.

As for our present day requirements they are fairly uniform. Those in the Mediterranean and India are not likely to increase, those in Iraq and on the Rhine will decrease, in Egypt, China and the Soudan will be liable to fluctuation, what we lose on the swings, etc.

Regarding the strength of our army, like every other nation, we have to consider (a) a minimum establishment for peace time, (b) the maximum expansion we can afford for war. In common with others we have to steer between an army of highly efficient long service effectives, costly and unexpandable, and an army with an excessive reserve, cheap, large, but for a time, at least, inefficient. To these considerations we have to add our Imperial responsibilities, better met by the former alternative, and our war requirements better met by the latter. No nation can afford to maintain in peace, the force necessary to preserve it from all possible contingencies. It is sufficient to consider reasonable probabilities, guard against them and lay down the general lines for expansion to meet the needs arising in such a war as the last.

This combination of Colonial and European requirements has been met by different nations in different ways. It is doubtful if we have a great deal to learn from the various methods employed and, on the whole, our Imperial Police have worked efficiently and without undue expense, though this for the most part has fallen on the unfortunate tax-payer of the United Kingdom.

The birth of a General Staff at the beginning of this century, with a regular school of military thought laid down for the first time the duties and responsibilities of the British Army and the organization

of the British Expeditionary Force followed as a natural corollary. It will be readily admitted that to-day, however unsettled the state of Europe may be considered, it is far less explosive than it was in 1914 and that a diminution of our expeditionary force is therefore at least partly comprehensible. The Cardwell System therefore still appears to be able to "deliver the goods" in adequate quantities and to provide an answer to the double demand our requirements make.

No one will contend that we have a homogeneous army but, strictly speaking, nor has any other first-class power. "The proof of the pudding" may be gathered from the really remarkable way in which units of the Regular, Colonial "Service", and Territorial Forces worked up to a common level and it is true that each at times performed feats of which any other unit, from the Guards downwards, might well be proud. Our system produced no "Stoss truppen." Every division was a fighting division though sometimes it was better than at others, varying with the character of its commander. The accusation of lack of homogeneity leaves me cold; its deeds are a sufficient proof that the system on which the army was raised was essentially sound. It is true that the basis of recruiting had to be widened and that an Irish battalion occasionally got a batch of Midland recruits, but in practically every case the unit retained its original characteristics to the end of the war, the territorial system thus remaining triumphant.

It will be at once conceded by every infantry and cavalry commander in the late war that the mainspring of success was regimental *esprit de corps*; that this was artificial could not be admitted for a moment. From the day the recruit arrives in barracks he joins the Corunna Platoon, learns that his battalion fought at Dettingen, finds out that the Regiment's nickname, The Snappers, Fighting Fifth, The Diehards, Dirty Shirts, Holy Boys, The Kiddies, is derived from some tremendous feat of arms or cherished commendation by Marlborough, Wellington, Clive or Wolfe. He struggles through his third class certificate examination which tests his knowledge on these points, on the meaning of his cap badge; he reads his regimental magazine and battalion orders, which recall past battles, enjoys battalion holidays, Fontenoy and Plassey day, competes for trophies named after the great deeds or heroes of the past, examines the Regimental Memorial and joins the Old Comrades' Association. To an old regimental

soldier the statement that *esprit de corps* is artificial is to use a foolish expression—quite unthinkable. *Esprit de corps* is a living force and only those who instil it daily have any conception of the marvels it can work.

As to tradition this is almost as valuable. A good marching regiment simply does not have stragglers; the traditional boxing regiment is 25 per cent. to the good before the fight starts. The writer of this article tried to teach his battalion first-class hockey, the twin battalion had the finest team in the army for years. No, the tradition was not there, the men weren't interested, the first-class team was not evolved. Of course it would have come in time, but slowly and painfully. In the other battalion it was there no matter what happened to the individual members of the team. Tradition, pure and simple! In infantry and cavalry regiments both *esprit de corps* and tradition are in ninety-nine cases out of a hundred continuous. There is no need to force a plant of such healthy growth.

It is true that Brigade and Divisional *esprit de corps* came into prominence during the Great War, but this cannot take the place of the regimental spirit. For one thing, in peace no regular unit in Great Britain belongs to the same division for more than five years and scarcely ever sees it assembled and, even with territorial divisions, the sentiment would not be enough to provide healthy emulation between its units. It is none the less a most valuable asset and was much utilized by the more thoughtful Divisional Commanders, though not by all.

I come to the last objection to the Cardwell System—the regimental list for the promotion of officers, and in this case the critic is on surer ground. At present the rates of promotion in addition to being very slow are utterly uneven, and generally speaking, the better the regiment the slower the promotion. It must be made clear, however, that bringing in an officer from another regiment to command does not tend generally to slow up the promotion of the regiment to which he is posted. One comes and as a rule another goes. It must be admitted nevertheless that the grievance exists; the critic's solution will be considered in its proper place.

So much for his premises. I have not a great deal left to dispose of but will take his proposals in turn.

The arrangement of our regular infantry into eight or ten groups would involve the creation of enormous group depots. These would

be completely out of touch with six out of seven of their regimental areas, they would be a great expense to initiate and would probably absorb all the savings accruing from the sale of the evacuated depots. The present close liaison between Depot and Territorial unit would cease to exist.

A general list for officers would mean that an officer would have to be qualified at short notice to deal with such contradictory types as the stolid Westcountryman, the dour Northumbrian, the impetuous Irishman, the stockey Welshman, the independent Lancastrian, the nimble-witted cockney and a dozen more. Truly he would have to be an "Admirable Crichton." It would be a gross waste of power using a Highland officer to command a Devonshire battalion. Square men for square holes is true economy. The critic makes a dangerous remark when he says that practically all officers come from the same source. This is distinctly misleading, for although they come from the same stratum of society they come with every imaginable kind of family and property tie. Many would find it impossible to combine service overseas with their interests at home with the obvious result that they would not enter the Service and there can be no compulsion in the matter.

It certainly would be an advantage that all officers should take their turn at service overseas. At present the wealthier officer stays at home and his less fortunate brethren literally, bear the heat and burden of the day. To make the proposal at the present moment, when officers are not easy to get, would be highly inexpedient and would without doubt increase the present shortage of officers. Let us wait until we are well off before we become prodigal with our resources, if we ever do. A general list is no solution and to suggest it as a cure for this difficulty seems to be using a clumsy steam hammer to crack a walnut. A far simpler plan will be suggested.

It is not clear whether our critic would train his Indian drafts at the depot or let the home battalion do so and send them to the depot previous to embarkation. In the former contingency the home battalions would be emasculated and the depots crammed with unwanted men; in the second there would be a waste of time and money sending a draft from, say, Portsmouth to Glasgow and down to Southampton for embarkation.

The proposal is made to overcome the difficulty caused by the difference of establishments of technical units at home and abroad,

and similarly of modern equipment, arms and vehicles, by leaving the units continuously overseas. They would be kept up to strength by drafts. This would mean the death to any sort of connection between home and "foreign" units and would hardly be tolerated by those fated to permanent exile without considerable improvement being made to their conditions of service.

The super-depot would apparently be a Brigadier's command in peace and a Lieutenant-General's in war, for it would have a normal capacity for 3,000 men in the former rising to at least 10,000 in the latter state. In addition this busy officer would have to maintain some thirty territorial battalions, and doubtless a proportion of the other arms as well. Truly a fine command for an Officer Commanding Depot. There is little doubt that if these proposals were adopted our carefully nurtured and highly valuable territorial liaison would cease to exist and there would be little or nothing to take its place.

From what I have written it is plain that I am whole-heartedly against the proposals put forward for the abolition of the Cardwell System. At the same time it is recognized that it has its imperfections and the best method of improving these may now briefly be considered.

It may be assumed that the rough rule of the British Army being equally divided at home and abroad stands good. Great Britain receives many advantages in return for keeping up "The Imperial Police Force." She sends the lads out trained recruits, they return trained veterans, the finest troops in the world. Abroad they police the outskirts of Empire and they act as a strategic reserve in case of national emergency. At the beginning of the Great War India sent her veteran battalions home in numbers, receiving raw territorial troops in their stead. The system delivers the goods, or has so up-to-date. Doubtless, if intelligently adjusted and applied, it will continue to do so.

It is true that the tropical climate and uncivilized state of parts of our Empire will render an European Expeditionary Force unsuitable or partly unsuitable, for service for many years to come, and therefore a variation of establishment must be faced between the home division and those overseas in tropical climates.

As regards expansion in time of war, Lord Kitchener rejected the Territorial Army because he could not count on it for service overseas. Had he known more of it his decision might easily have been different.

In any case, for future emergency the Territorial Army is our real line for expansion and, this being so, it must be kept in the closest possible touch with the problems and training of the day.

My concrete proposals for dealing with the problem are as follows :—

- (1) The strength of the British Army to be determined in the future as in the past by a simultaneous consideration of (a) its colonial necessities, (b) the provision of an adequate expeditionary force, a balance being struck between the two.
- (2) The provision of an adequate supply for colonial and other overseas garrison requirements of the new technical units and weapons, the major portion of these to be found as heretofore by British rather than Indian units, (*e. g.*, R. A. units at present.)
- (3) Liaison between regular depots and territorial army units to be strengthened in every possible way, regular units to be stationed in their own country whenever feasible.
- (4) Territorial units to support and maintain themselves from their own drill halls in war, leaving the depots for the regulars.
- (5) Every area to be allotted the quota of troops of all arms which, in a national emergency it is considered able to raise and maintain, making due allowance for the industrial needs of the nation in such a crisis, *e.g.*, one Territorial Division in war might be able to increase its strength by 40, another by 120 per cent., the new units being made up into new divisions.
- (6) The inequality in officers' promotion to be overcome by introducing the time scale of promotion, as in the Indian Army, but only up to the rank of major, thereafter purely by selection.

It is considered that these proposals where not already in force could be introduced with a minimum of derangement to a well tried system and that they would meet our requirements for many years to come.

NOTES ON APPRECIATIONS, INSTRUCTIONS, OPERATION ORDERS AND MESSAGE WRITING.

By

CAPTAIN O. G. BODY, D.S.O., R.A.

The basis of success in the Staff College Entrance and Promotion Examinations is the art of writing the short Military Essay. This must be constantly practised against time. A clear and concise style in essay writing is the foundation of good order writing.

“If the trumpet sound an uncertain note who will prepare himself for the battle”.

I.—APPRECIATIONS.

1. Information regarding the writing of military appreciations is contained in Training and Manœuvre Regulations, section 25. This section should be read carefully in conjunction with the study of these notes.

In Army Order No. 117 of 1926, this section of Training and Manœuvre Regulations was amended as follows:—

Amendment. Section 25, page 45. For paragraph 4 substitute:—

“4. The writing of appreciations in the accepted logical sequence is a necessity. The general headings and necessary sequence are—

- (i) Object.
- (ii) Considerations which effect the attainment of this object.
- (iii) Courses open.
- (iv) Plan.

Unless the object is clearly stated in the opening paragraph, the appreciation is apt to become involved, and the decision—which is the aim and object of all appreciations—shrouded in doubt. From the plan, as given in the final paragraph, any Staff Officer should be able to write the necessary orders.”

This amendment is an important one. In the original edition of T.M. Regulations, 1923, there was no insistence on a definite sequence. The book stated that “so long as the reasoning is logical and leads up to a definite plan, the actual form of an appreciation is of minor importance.” The amendment quoted above now alters this and states definitely that “the writing of appreciations in the accepted

logical sequence is a necessity." The writing of appreciations, therefore, has been brought into line with the writing of operation orders and a set form for each is insisted upon.

2. Examples of appreciations which are to be found in works of military history are not of much value to the student working for the Staff College Entrance or for Promotion Examinations. They deal for the most part with major strategy and follow no set form. The candidate requires to study the type of appreciation which can be completed in the examination room in the usual half or three-quarters of an hour allowed by the examiners. He is also chiefly concerned with questions of tactics.

T. and M. Regulations, section 25, para 2, states:—

"A distinction must be drawn between—

- (1) Appreciations in connection with subjects elaborated in peace time, such as plans of campaign, and
- (2) Appreciations of minor strategical and tactical problems in the field, which in the case of minor tactical problems, may not even be committed to paper.

"In the former, rapidity of compilation is immaterial, every known or surmized factor, however slightly it may bear on the situation, must be considered and recorded, since future developments may materially alter its importance".

"In the latter, rapidity is generally all important, and the time available will seldom admit of all factors being recorded, though they all should receive consideration."

The former type of appreciation may be dismissed from consideration for examination purposes. It is the latter type, concerning problems of minor strategic and tactical importance, with which we are concerned; the type which in practice would seldom be committed to paper. Section 25 T. and M. Regulations is, however, chiefly written with an eye to the former type, and the directions given regarding form, etc., are rather difficult to adapt to examination requirements. The list of factor headings under para. 7 is certainly more suited to major strategy than to minor tactics, and it is the latter type of problem with which the student is confronted in the examination room.

3. Time is such an important consideration in the examinations, that students will be well advised to get into the habit of a definite drill regarding form, headings, etc. This should come just as naturally to them as heading, dating, opening, closing and signing a letter

of private correspondence. There is not time in an examination room to sit and think about the correct sequence of paragraphs, etc.

Keep to the short sentence and the direct military style without any efforts at high flown English.

An appreciation should be definitely grouped under four main headings. Just as an operation order should have its six main headings—Information, Intentions, Method of Execution, Administrative Arrangements, Inter-Communication, and Acknowledge, so an appreciation should be grouped under the four main headings—Object, Factors, Courses Open, Plan. These four main headings should either be set in the margin well clear of the text or set in bold block letters so as to break the text and show distinctly that the appreciation is so grouped. Sub-headings can be set level with the text in running hand, but clearly numbered and underlined.

4. *Heading of an Appreciation.*

T. and M. Regulations, section 25—5 states:—

“The heading (if the appreciation be written) should state what the situation is, and from whose point of view it is being appreciated. The place where, and the time and date on which the situation is being appreciated should also be included.”

This paragraph is often the cause of valuable time being wasted in the examination room. A neat heading which will embrace all this information is difficult to hit upon. “What the situation is” is often hard to state. But *don't waste time over the heading*. The heading of any paper is merely appended so that it can be easily recognised. Time and place are important and must be included. Some such heading as “Appreciation of the Situation by C. C., 1st Infantry Brigade, Givenchy, 1800 hours, 11th April 1917,” will generally suffice. If the C. C., 1st Infantry Brigade, has been given definite orders to attack, then the heading might run “Appreciation of the Situation, by C. C., 1st Infantry Brigade, for attack on Angres, Givenchy, 1800 hours, 11th April 1917”.

Very often the appreciation has to decide what nature the operation is to take, *i.e.*, to defend, to attack, to retire, etc. In this case the nature of the operation cannot be stated in the heading, although T. and M. Regulations states that “what the situation is” should be stated. This is just the type of trouble which worries the candidate who has not had sufficient coaching in examination craft.

Object.

It is very important to state this clearly and concisely. Although it may only consist of one or two lines it requires the most careful consideration. If you mis-state the "Object" the whole of the appreciation is worthless. The "Object" paragraph is the statement of the problem with which you are confronted. It is the question to which the final plan will provide the answer. If it is regarded in this light its importance will be realized.

In major appreciations concerning the inauguration of a campaign the "Object" is usually "to destroy the enemy forces". In a subsidiary theatre of war the "Object" may well be "to protect" a certain locality. In every case a precise definition of the "Object" must be made. Failure to define the "Object" clearly, correctly and precisely has time and time again resulted in failure. The campaign in Mesopotamia provides a good example. At the outset the "Object" in view was vaguely defined. In consequence it was expanded by ambitious and optimistic commanders so as to cover operations much more extensive than were originally intended by the Home Government at whose instigation the campaign was inaugurated.

In minor appreciations, however, the difficulty of stating the "Object" correctly does not usually arise. If acting on higher authority the Object will generally be clearly stated in the instructions received. If asked to write an appreciation in the examination room the "Object" will be somewhere definitely stated in the scheme. It is merely a matter of picking it out. It is nearly always wrapped up and camouflaged somewhere in the narrative. Definite orders may be given to "Capture the village of X", "to secure the crossings over the River Y by 1600 hours to-day", "to hold the enemy east of the line X Y until 1800 hours to-day, etc. Each of these instructions might provide an "Object" paragraph for an appreciation.

It is very seldom advisable to give a "primary" and a "secondary" object. If you are considering this necessity it probably means that you are not thinking big enough. Often in appreciations officers make the mistake of choosing an obvious course open and calling that their object. Note the warning which T. and M. Regulations contains. It is important not to confuse "Object" with "Objective". The object can often be stated at the outset, but the selection of the

objectives, to attain that object, may only be possible as the result of an appreciation of the situation."

Again it is seldom advisable to append qualifying clauses to an object. For example an object might be stated as "To secure the high ground south of the **River Test** up to the line of **Freefolk Wood** by 0800 hours, 1st July" to append an explanatory clause such as "so as to enable the 1st Division to commence crossing the river at 0800 hours" would be redundant, and only tend to confuse the main idea.

Considerations which Effect the Attainment of the Object.

This paragraph is usually headed "Factors" for the sake of brevity.

The list of Factor headings given in T. and M. Regulations, section 25—7, is on the whole rather confusing. Time will not permit such a long list of factors to be considered. Such factors as "Relative resources in men, money and material of belligerents". "The political situation", "Character of opposing Commanders". "Supply and Transport" seldom enter into problems concerning minor tactics.

Factors can of course be multiplied *ad lib*, and the inclination to include a large number of factors in order to show the examiner that all points have been considered must be avoided.

Three or four Good Factors are generally sufficient in Minor Tactical Appreciations.

T. and M. Regulations states in section 25—2 in minor strategical and tactical appreciations "rapidity is all important, and the time available will seldom admit of all the factors being recorded, though they should all receive consideration". In the examination room there is not time to record all possible factors, only the more important can be committed to paper.

"Time and Space" should generally be considered early in most tactical appreciations. "Topography" is nearly always important. This latter must be discussed with regard to its suitability to movement and the co-operation of all arms, *e.g.*, "Enemy right flank about X village there are several small woods. Visibility bad. Good approaches for Infantry. Artillery and M. G. support difficult. Cannot make use of my artillery and M. G. superiority on this flank."

Often there are certain limiting factors which, if considered early on, will tend to keep the length of the appreciation within limits.

The most important factors should be considered first. For example, a good and definite deduction from the "time and space" factor may well impose a limit to the area of the map which need be considered under the "topography" factor; whereas if these two factors were considered in the inverse order, *i.e.*, "topography" before "time and space", there might be a tendency to discuss irrelevant matter.

Any disparity in arms and armament generally warrants a special factor, as this will be bound to exert an influence on the ultimate plan. Schemes are often designed to test a candidate's knowledge concerning the tactical handling of up-to-date equipments, and examiners naturally dislike to see their schemes falling "flat". Discussion of artillery, tank, armoured car, or R. A. F. situations under some such paragraph as "Arms and Armament" or "Relative Strengths" is generally sure ground to work upon, and pleases most examiners.

Prior to the amendment of T. & M. Regulations by the issue of Army Order No. 117 of 1926, an appreciation always opened with a statement of the "Position and Relative Strengths of Opposing Forces." This may now have to be set out as a factor, but unless there is a definite deduction to be made, do not consider it.

An appreciation should never resolve itself into an intelligence summary, or a mere statement of information to hand. Each factor should include a definite deduction. It is no use merely stating facts, it is the deductions from the facts which are important. Each factor is really divided into two parts:—

- (1) A statement of the fact.
- (2) A deduction from the fact.

Of course there may be several such statements and deductions under one factor heading.

In working indoor paper schemes, therefore, look through the narrative and see what information is given to you. If you have an important deduction to make from that information, then you have the complete material for a factor. Set down the information and briefly state your deduction. You have now built up a factor. Remember that besides the information contained in the narrative, there is also information contained on the map which deserves consideration in such factors as "Time and Space" and "Topography".

Courses open to both sides.

In considering courses open to both oneself and the enemy, only reasonable and probable courses should be considered. It often

happens that only one course is open or worth considering. If this is the case, well and good. Do not complicate matters by putting up improbable alternatives. Certainly if your argument under the factor headings has been vague and ill-reasoned, you will be left with a variety of "courses open". If your deductions have been sound, then, probably, the whole argument will lead in logical sequence to the one sound course open. Discussion of a variety of "courses open" is often the sign of a badly argued appreciation.

Note the words of T. & M. Regulations, section 25—8: "It is usually better to consider the courses open to one's own side before dealing with those open to the enemy. To reverse this procedure tends towards a surrender of the initiative, when, however, the initiative obviously rests with the enemy, it may be advisable to consider his probable action first."

Plan.

The plan of the appreciation is the final answer to the question which has been stated in the Object paragraph. On it the method paragraph of the operation order is written. The plan should show in broad outline how the troops are to be used. "In sufficient detail for a trained staff officer to be able to draft the orders required to carry it out."

The usual faults in writing the plan are:—

- (1) Not being definite enough.
- (2) Wandering off into details.

The second of these faults is the more common of the two, and there is an inclination to elaborate the plan until it develops into an execution paragraph of an operation order.

In writing a plan of an appreciation more license is allowed than in writing orders. In the appreciations, for example, there would be no harm in stating "I shall attack at dawn tomorrow". It is the business of the trained staff officer to convert "dawn tomorrow" into the exact hour and date, when he is putting the commander's plan into execution.

In considering the "plan" it is often advisable to take each arm in turn and detail its task. This ensures that the part each arm is to play is clearly shown.

Administrative arrangements can usually be omitted from tactical appreciations. The supply of ammunition and the evacuation of

wounded do, however, sometimes warrant a short sub-paragraph in the "Plan."

II.—INSTRUCTIONS.

The decisions of a Commander are notified to subordinate formations in the form of "Instructions" and "Orders".

"In framing orders no unnecessary responsibility should be thrown on subordinate commanders. On the other hand there should be no unnecessary interference with them in carrying out what is required of them. When definite action is required a definite order will be given. But when it is necessary to place a subordinate in a position in which he must act on his own judgment, anything in the nature of a definite order as to methods of action would be out of place, and Instructions should take the place of Orders. These Instructions will give the subordinate all available information likely to be useful to him, and state clearly the object to be attained, but will leave to the discretion of the subordinate the methods to be used for attaining that object. The Instructions will also make clear whether the attainment of the object is to over-ride all or any other considerations. In considering this important point, it must be remembered that great objects cannot be attained by half-hearted measures. In certain cases it will be necessary to issue special Instructions in addition to orders, *e.g.*, to commanders of detached forces."

Distinction between Instructions and Orders.

After deciding on the plan, the commander informs lower formations of the general idea of his plan of operations. This information is usually conveyed in the form of an Instruction. The object of an Instruction is to direct subordinate formations so that they may conform to the general plan of the command, and to give them an indication of the action they are to take, whatever the re-actions of the enemy may be. It expresses intentions and the general idea of the operation. It fixes the first object to be attained, and the subsequent objects to be kept in view, and it defines the respective rôles to be played by the lower formations. It foresees eventualities, and may direct alternative courses of action. It need not necessarily apply to a single day, but may determine the tasks of subordinate formations for a whole period of days. To sum up; it applies to the strategic and tactical conceptions which fix the guiding idea of combined action, and determines the general ends to be attained, without ever laying down the means

to be employed. In principle the instruction is accompanied by an operation order bringing about the execution of the operation in its first phase.

Orders proper, give formal instructions applicable under clearly defined conditions of time and space. The nature of orders is generally understood by all officers and they do not require definition. Instructions are of two kinds, Operation Instructions and Administrative Instructions.

Administrative Instructions deal with such matters as supply, transport, ammunition, medical and other administrative matters. The general outline of these instructions may, if it is considered advisable, be included in the paragraph in operation orders dealing with administrative arrangements, but this paragraph should be kept as short as possible.

Operation instructions are issued by the G. S. Branch for two purposes :—

- (i) Instructions used to indicate the general idea in the mind of a commander, when the situation is not sufficiently clear for him to give definite orders. Such instructions, while defining the object of the superior, give to the subordinate liberty to exercise his command in such a manner as he may himself decide to further or to secure that object.
- (ii) Instructions issued in conjunction with a certain operation order and amplifying it as regards details. They include detailed instructions as to the action of the various arms (artillery, engineers, etc.) especially when the inclusion of these details in the order itself would make it too lengthy and so detract from its clarity.

If the use of an Operation Instruction is fully understood, those whose business it is to communicate the decisions of commanders to subordinate formations will have their task greatly simplified.

In the examination room the candidate is concerned with both Instructions and Orders. He must know what situations warrant orders and when the decisions of higher command are best conveyed by instructions. Officers very often encumber orders with a lot of details which should have been issued in separate instructions, *i.e.*, either in separate operation instructions or in separate administrative

instructions. Again orders are often issued for situations which legislate too far ahead. In this latter instance an order should be issued to cover the initial stage of the operation, and an instruction to indicate the general lines on which the commander hopes to develop the whole course of events.

Instructions may entirely replace orders when situations are obscure. Orders can only be issued when situations are definite and sufficient information is to hand. Cavalry on an independent mission may act on an instruction. A march order may be accompanied by instructions to an advanced guard commander. In protective duties generally Instructions are often employed, as situations are, as a rule, indefinite.

The major strategic conceptions of a commander nearly always necessitate the writing of an operation instruction, especially when an entirely new operation is being initiated. The following example is given.

You are advancing from A to attack an enemy force defending the town of B. A and B are situated three days march apart. Your general intention underlying the whole operation is to bring the enemy to decisive action in the neighbourhood of B. Your immediate intention is to effect the first days approach march. Your general intention underlying the whole operation must certainly be conveyed to subordinate formations but it cannot be stated in operation orders. The enemy is not yet located. The conditions of time and space are too indefinite to enable you to write an order detailing how this intention is to be executed. The General Staff would therefore issue an operation instruction giving the general intention of the commander and the lines on which he expects to develop the whole operation, and would also issue an operation order to bring about the immediate intention of moving the troops from A to C, *i.e.*, the order for the approach march to commence.

The habit of relying on the order on all occasions results in too rigid a control, and the mistake of giving definite orders, under conditions where time and space are indefinite, is very often made.

In some Continental Armies the direction is also recognized. The direction is merely a glorified instruction, and used in connection with major strategy and issued by Supreme Command; and instruction in this case being associated with minor strategy and tactics and used by lower formations.

An Instruction may be headed either Operation Instruction or Administrative Instruction and should be given a number. The Secret Copy No. and date should also be filled in just as in the heading of an order. Below this should be given the list of addresses. It must be remembered that an Instruction is addressed personally to a unit or formation commander, and not sent direct impersonally to the unit or formation as is the case with an operation order. Although it cannot be grouped under main headings or set out in any definite form, it is best to follow as closely as possible the general sequence which is followed in order writing.

If the Instruction is issued in amplification of an operation order, the operation order with which it must be read should be stated immediately under the heading. The operation instruction will necessarily bear a different number to that of the operation order with which it is issued, but the copy number of both, forwarded to a particular unit or formation should if possible be the same, but in certain instances, the orders and instructions may have an entirely different distribution list.

Example of Heading.

Operation Instruction No. 54. Secret. Copy No. 6.

Issued with Operation Order No. 107, 1st September, 1927.

To C. C. 1 Infantry Brigade.

2 " "

3 " "

C. R. A.

C. R. E.

A. D. M. S.

O. C. Div. Train.

III.—OPERATION ORDERS.

Instructions regarding the writing of Operation Orders have previously been distributed between both volumes of F. S. R. A certain amount of valuable information was contained in F. S. R., Vol. I, Chapter XIII "Orders, Instructions and Reports in the Field"; and other information was to be found in F. S. R., Vol. II, Chapter XIV "Orders and Reports". This information has now been collated, brought up to date, and published in one special manual. Instructions for the Drafting of Orders, Instructions, Report and Messages, published with Army Orders for March, 1927. This manual should be regarded as the authority for all matters concerning the compilation of orders.

The preface to this manual reads as follows :—

“The abbreviations and instructions for the drafting of orders, instructions, reports and messages laid down in this pamphlet are for use in the field during training. They supersede the instructions contained in Chapter XIII and Section 97, paras. 1 to 6, F. S. R., Vol. I, 1923 ; Sections 154, 155 and Chapter XIV, F. S. R., Vol. II, 1924 ; Section 13, paras. 1, 14 to 23 and Section 14, paras. 15, 17 to 22 of the Field Service Pocket Book 1926, and the pamphlet “Abbreviated titles for use in the field and during training” issued with Army Order 57 of 1926”.

A great deal of the material contained in the military manuals concerning order writing is, therefore, obsolete, and care must be taken lest out of date matter is unwittingly studied and taken as authoritative.

“Instructions for the Drafting of Orders, Instructions, Reports and Messages 1927” has been taken as the main Authority in the compilation of the notes contained in this Chapter.

In connection with order writing it is also necessary to study the Chapter of F. S. R., Vol. I, which deals with “Inter-communication in the Field”. Unless you are fully acquainted with the means of transmission, etc., you will always go wrong over order writing, their issue, getting them to units in time, etc. The form which orders are to take, *i.e.*, whether verbal, in message form, or in the full form of an operation order, is always influenced by the time at the issuer’s disposal, and the means of communication available. A good knowledge of signal establishments and the capacity of the various signal formations is essential for the writing and issue of orders. Unless a candidate has a fair knowledge of the working of Signals he is very likely to be impracticable in the solution of paper schemes. This fault will be heavily penalized by examiners.

Sequence and form of orders.

In order to facilitate the quick digestion and interpretation of orders it is desirable that the same logical sequence and form should be used.

As regards the form of the order. All the subject matter should be grouped under the six main headings, Information, Intention, Method, Administrative Arrangements, Inter-Communication and Acknowledge. These six main headings should be set in block capitals so as to break the text. Under these six main headings all paragraphs should be grouped. The headings of the paragraphs should be set

level with the text and written in running hand and underlined. Paragraphs should be numbered consecutively throughout the order. The general form of operation orders recommended is shown in the many examples included in these notes. The six main headings of an operation order will now be discussed in detail.

Heading.

.....Div. Operation Order No.....	Secret.
Ref. Map.....	Copy No.....
	Date.....

The above form of heading must be followed.

If units have been grouped for any special operation, *i.e.*, Advanced Guard, Rear Guard, Flank Guard, Outpost duty, etc., the formation issuing the order will always be set down in the heading. For instance, if the 1st Infantry Brigade is operating as an Advanced Guard with the 1st Fd. Brigade, R. A., 1st Fd. Coy., R. E. and 1st Fd. Amb. attached, the whole would normally be commanded by the C. C., 1st Infantry Brigade, and the orders to the Advanced Guard would be headed :

1 Infantry Brigade Operation Order No.....

It would not be correct to head the order

Advanced Guard, Operation Order No.....

The Advanced Guard of the force will be changing from day to day, and some definite formation must be responsible for filing, diary, etc.

Similarly all such headings as "Detached Force Operation Order No....." are wrong. The order should be headed as issuing from the parent formation engaged, no matter how many other units have been attached for a particular operation.

INFORMATION.

Instructions for the Drafting of Orders, Instructions, Reports and Messages, 1927, Section 6, para. 3—10.

Information.

Regarding the enemy. This paragraph will give a plain statement of facts and deductions from all sources, arranged chronologically so as to give a general picture of the situation. It will include only such information as is necessary to assist recipients in carrying out their tasks. If it is undesirable to mention the source of the

information, the degree of credibility attached to it should be stated, and the time at which it was acquired.

Regarding our own forces. This paragraph may include the intentions of the higher command and of neighbouring formations, arranged logically, *e.g.*, corps situation, divisional situation, brigade situation. The amount of information of this nature which can be published will depend on considerations of secrecy. In this connection the present indicative tense will be used when referring to troops not under command of the commander issuing the order, *i.e.*, "is advancing", "is attacking", etc.

Boundaries. Boundaries laid down by the higher command, *i.e.*, in divisional orders, the inter-divisional boundaries laid down by the corps.

In practice, of course, the information paragraph is very important and must be accurately stated, but in the examination room matters are different, and few marks can be expected for a re-statement of information already given in the scheme. The most important paragraph from an examination point of view is generally the method paragraph, so get on to this as soon as possible.

The information paragraph can often be dismissed as follows:—

Information. As in scheme.

Circumstances may, however, necessitate a full Information paragraph, and many examiners and Instructors are against dismissing the Information paragraph in this manner.

Candidates are, however, nearly always pressed for time in the examination room, and they must be prepared to risk dropping a mark or two if up against a meticulous examiner, in order to devote sufficient care and attention to the more highly marked portion of their work.

In writing an order based on an order from higher authority, it is not sufficient to look through the information of the latter order and decide what to include in your own. Matter which is included in the intention or even the method paragraph, from the point of view of the higher formation, may well have to be repeated in the lower formation order as information. For example, a corps order might state in its intention paragraph:

"The advance of the 1st Corps will be continued tomorrow"—

1st Division *via* Bagshot and Chertsey.

2nd Division *via* Ascot and Staines.

3rd Division *via* Woking and Weybridge.

This would all have to be shifted up into the information paragraph of the divisional order written on receipt of the Corps order.

“If it is not desirable to mention the source of the information, the degree of credibility attached to it should be stated, and the time when it was acquired.”

Normally the source of the information will be stated, as “R. A. F. reports up to 1800 hours state”, “Reports from armoured cars show that there was no enemy West of the River Test at 0600 hours to-day.” If it is not desirable to mention the source then “reliable” will often suffice to show degree of credibility.

Do not forget the importance of mentioning in orders the time at which the information was acquired.

In dealing with orders to detachments which are operating at a distance, the information paragraph is often of increased importance. The information paragraph shows the facts on which the order is based, and a “departure from the letter or spirit of the order is justified, if the subordinate who assumes the responsibility bases his decision on some fact which could not be known to the officer who issued the order.” Hence the importance of a very accurate statement of information in orders to detachments, when communication is likely to be slow and difficult, and the recipient may be compelled to act without referring the matter to the issuer. Whenever a subordinate is likely to be saddled with the responsibility of departing from or varying the orders he has received, on these grounds alone, a more elaborate information paragraph is always indicated.

INTENTION.

Instructions for the Drafting of Orders, Instructions, Reports and Messages, 1927, Section 6, para. 3—10.

Intention.

This paragraph must give clearly and concisely what the commander issuing the order intends to achieve; it must not be merely a repetition of the intention of his superior; it should not exceed the period covered by the order. If it is necessary to state an intention exceeding the period of the order it should be issued personally to those directly concerned.

Alternative plans and conditional statements, depending on developments, should not be given in operation orders, as they are calculated to cause doubt and uncertainty.

In this paragraph the future indicative tense *will* be used, *e.g.*, “will advance”, “will attack”, and so on.

The most important thing to notice is that the intention should not exceed the period covered by the order. That is to say, there must be a definite relation between the intention paragraph and the method paragraph, *i.e.*, when the order has been executed, the intention must be fulfilled. To state an intention which the method paragraph fails to cover is a very common fault in order writing. “If it is necessary to state an intention exceeding the period covered by the order it should be issued personally to those concerned.” That is to say, an operation instruction as well as an order should be issued. It may also be necessary to issue alternative plans and conditional statements to commanders, and in these circumstances also an instruction should be issued. Operation orders can only be written under definite conditions of time and place.

The beginning of an operation usually demands an operation instruction as well as an operation order for this very reason. For example, take an operation necessitating an approach march of a division to an encounter battle. Probably the intention during the first day's operation is merely to move up the troops from X area to Y area, but the subordinate commanders, in order to act intelligently on advanced guard, outpost, etc., must know the general intention of the commander, *i.e.*, if he intends to accept battle on some selected position, or if he intends to seek battle wherever the enemy is met, etc. In this case the operation instruction might contain the intention.

“To bring the enemy to decisive action in the neighbourhood of Z”.

The operation order might contain the intention ;

“The 1st Division will move from X area to Y area”.

The period covered by the order is merely the move on the first day from X to Y. The necessary orders for bringing the enemy to action cannot yet be given. The only way to overcome this difficulty is to issue an instruction as well as an order.

A good and clear intention covers a multitude of sins. If a commander has made his intention clear, subordinate commanders can act, or, at any rate, ask for any special orders, if necessary orders have been omitted.

Great care must be taken in the wording of all orders, but of the intention paragraph in particular, and choice of words is most important. For example; the following intention would be suitable in an order to a rear guard to take up a defensive position in which to fight a rear guard action.

"1 Infantry Brigade and attached troops will resist the enemy advance in a defensive position astride the road Stockbridge-Basingstoke about the 15th milestone."

The above intention would be far too passive if a commander really intended to stand and fight on a prepared position. In this instance the intention might become.

"1 Infantry Brigade and attached troops will accept battle in a prepared position astride the road Stockbridge-Basingstoke".

To acquire a high standard in order writing frequent and continuous practice is necessary, accompanied by a most critical examination of the details of the order when written.

The following is an example of a bad intention paragraph.

Situation.—An enemy raiding force has crossed your frontier with the object of raiding villages and collecting supplies. You are in command of a mixed force of all arms located in the area to prevent such raids. The following intention was issued:—

"To prevent this raid if possible; if not, to recover the supplies; to locate and attack the enemy's covering force, and cut him off from his line of retreat."

It is conditional and indefinite, and finishes up with a confusion of ideas—"to locate", "to attack", "to cut off the retreat". The recovery of the supplies is for the moment a minor consideration. The raid is already taking place. You must teach the enemy that raiding your territory is too costly in life. Your intention should read "to locate and destroy the enemy's covering force". This should be quite sufficient, and it is a definite intention which shows no confusion of thought.

The following is a further example of a badly worded intention:—

"The main body of the Advanced Guard will attempt to dislodge the enemy from the village of Longstock."

This is too long-winded, and there is no need to state "will attempt" or even to mention the main body.

"The Advanced Guard will attack Longstock."

Or better still :

"The Advanced Guard will capture Longstock."

Method of Execution.

Instructions for the Drafting of Orders, Instructions, Reports and Messages—1927. Section 6, para. 3—10.

Method.

Under this general heading will normally come paragraphs dealing in logical sequence with the tasks allotted to the fighting troops and aircraft, based upon the intention of the commander and in sufficient detail to ensure co-operation.

"The object of an operation order is to bring about a course of action in accordance with the intentions of the commander, and with full co-operation between all ranks." It is the method paragraph which ensures co-operation between all arms and units. If an operation order is regarded as a co-operation order, its purpose will be more generally understood and many faults in order writing will be avoided. If an order is to ring true and carry conviction this paragraph must convey the impression that the commander has used every unit and every weapon at his disposal to best advantage in order to fulfil his intention.

Notice that the method paragraph also contains orders to the R. A. F., and that in all operation orders the R. A. F. are dealt with just as the artillery or tanks are dealt with, *i.e.*, merely as a separate arm. No undue prominence is given to them on account of the fact that they are a separate service.

Arms are generally considered in order of importance, the three chief fighting arms being dealt with first, *i.e.*, Infantry—Artillery—Tanks—then Royal Engineers, etc. The R. A. F. sub-paragraph is normally placed at the end of the method paragraph. The above order applies particularly to problems of attack, defence and outpost. On protection duty cavalry and armoured cars assume increased importance and may have to be considered first under this main heading. Each separate arm should have a sub-paragraph to itself.

In writing the method paragraph of an operation order do not forget the value of tabulation. "With the increased length and complication of operation orders, it may often be advisable to place in appendices, details, such as the hostile order of battle, the composition

of a detachment ; the order of march, or the artillery plan of attack, leaving only the important essentials in the body of the order. Tabulation of such details helps to clearness."

With the small mixed forces employed in minor tactical operations, appendices are not as a rule advisable, except perhaps in the case of march tables. Even a march table, attached separately, is not required with forces below brigade group strength. In the examination room tabulation in the body of the order often tends to brevity and clearness, and the actual arrangement of the matter can often do much to ensure that it is correctly understood.

The following is an example taken from the method paragraph of an operation order :—

Situation. An infantry brigade attack.

Method paragraph. Orders to infantry only are given.

Infantry.

The battalions comprising the 1st Infantry Brigade will attack as follows :—

A Bn. on the right. B Bn. on the left. C Bn. in the centre.
D Bn. in reserve.

Boundaries.

A Bn. right boundary A—B—C (all inclusive). Boundary between A and C Bns. D—E—F—(all inclusive to C Bn.). Boundary between C and B Bns. H—I—J—(all inclusive to B Bn.). B Bn. left boundary K—L—M—all inclusive.

Objectives.

A Bn. X Village. C Bn. Z Hill. B Bn. Y Wood.

Zero hour.

Attacking Bns. will commence the attack from the line of the railway at 1100 hrs.

Reserve.

D Bn. will remain in reserve just south of N Village.

The writer obviously knew how troops were "laid on" in an infantry brigade attack, but had no practice at putting together an order of this sort. Infantry units could well act on this order, but it is not neatly stated, and is involved regarding boundaries, objectives, etc. (As regards boundaries there is seldom any need to detail boundaries for the outer flanks of an attack).

The most confusing part of the above order is, that the arrangement of the objectives is different to the detail of the attacking battalions, e.g., A. Bn. on the right. B. Bn. on the left. C Bn. in the centre. A Bn. X Village. C Bn. Z Hill. B Bn. Y Wood. This is very dangerous. Remember that operation orders are not going to be read in a well ordered office.

The following is suggested as a neater arrangement of exactly the same matter.

Infantry.

1 Inf. Bde. will capture from X Village to Y Wood inclusive.

Left.

Centre.

Right.

C Bn.

B Bn.

A Bn.

Dividing line between Bns.

Right and centre D—E—F—(all inclusive to right.)

Centre to left H—I—J—(all inclusive to centre.)

D Bn. in reserve just South of N Village.

Starting Line.—Line of railway. Zero 1100 hours.

Note. Troops do not form up for an attack in mobile warfare. They cross a starting line at a given hour in that state of deployment which the enemy's fire demands. The most forward elements cross at the hour stated. In position warfare, and in attacks at dawn generally, a forming up line may be ordered. Distinguish between a starting line, a forming up line, and a position of assembly.

Care must be taken not to include in the method paragraph any matter which it may be assumed is well known to trained troops. Matter which is laid down in existing regulations often creeps in. For example, in night operation something as follows is often included in the method paragraph.

"Rifles will not be loaded, but magazines will be charged. No firing will take place without orders. Absolute silence will be observed. No smoking or lights will be allowed".

All this is included in F. S. R., Vol. II, and it should not be included in operation orders. If troops are untrained and it is necessary to include matters of this kind, it should be given out in the form of a separate instruction.

Candidates are advised to practise writing method paragraphs for all the various types of operation.

ADMINISTRATIVE ARRANGEMENTS.

Instruction for the Drafting of Orders, Instructions, Reports and Messages—1927. Section 6, para. 3—10.

Administrative Arrangements.

Under this heading will come paragraphs giving general instructions as regards arrangements for supply, transport, ammunition, medical services, etc. These paragraphs, which will be framed in consultation with branches of the staff concerned, will be limited to what it is necessary for all recipients of the order to know. Detailed instructions for the services will be issued separately to those directly concerned.

It is not necessary to burden operation orders with long administrative instructions. One short paragraph will generally suffice. This paragraph must not be taken to cover all the administrative arrangements that are necessary to cover the period of the order. It must be limited to what is necessary for all recipients to know. Further administrative instructions will be issued by the administrative staff to those immediately concerned.

In the examination room, if the scheme has obviously been set to test tactical knowledge this main heading will have little importance, and can often be dismissed by "will be issued later". Ammunition supply, ration supply and wounded are the chief considerations in tactical schemes. In the Staff College and Promotion Examinations the candidate's knowledge of administrative questions is generally tested in special papers on this subject, and the administrative arrangements paragraph has little importance in the papers on Training for War or Tactics.

INTER-COMMUNICATION.

Instructions for the Drafting of Orders, Instructions, Reports and Messages—1927, Section 6, para. 3—10.

Inter-communication.

Under this heading will come paragraphs giving all necessary details as regards inter-communication, *e.g.*, where reports are to be sent.

What routes the headquarters of subordinate formations are to follow.

Instructions as to liaison duties with flank formations.

Instructions as to wireless control.

Method of communication to and from the air.

Details of any alternative means of inter-communication.

With the advent of the Royal Signal Corps the importance of this paragraph has greatly increased, and it must be treated far more seriously than heretofore. In examination this paragraph is highly marked and cannot be casually dismissed. This does not mean a long and complicated paragraph.

With troops on the move reports are generally sent to the "Head of the Main Guard" or "Head of the Main Body". With large formations, such as a division, it may be necessary to open report centre *en route*. The proposed moves of the headquarters issuing the order should be mentioned in attack schemes, also the line of advance of the main signal artery or arteries.

The detailing of routes to be followed by subordinate formations applies more to strategy and major tactics than to minor tactics, *e.g.*, Protective bodies, such as Advanced Guards, etc., require to have the routes of their headquarters detailed or it would be impossible to find them with messages or orders. It would, however, be almost impossible to detail the route which a battalion headquarters was to follow in encounter battle, but perhaps possible and advisable to detail its route in a deliberate attack with a limited objective.

Instructions as to liaison duties with flank formations are important when formations are advancing by several roads or in schemes of deliberate attack.

Instructions as to wireless control are seldom necessary in the type of scheme set in examinations. Allotment of wave lengths to the various units and formations is a matter for Signals to issue in their own Signals Instructions and should not be given in operation orders.

Under methods of communication to and from the air may be included instructions as to the display of ground strips, establishment of dropping stations, etc.

It may sometimes be necessary to mention the general policy as to whether cable is to be laid or whether runner and visual only are to be relied upon. A defence scheme, in which troops are occupying a covering position for a short time only, might not warrant the laying of cable. In this instance the inter-communication paragraph might state "Communication between units and formations will be maintained by runner and visual". The order "Cable will not be laid" at first sight looks simpler and shorter, but remember the artillery will

in every case want to lay short lines of cable from battery to O. P's. or a battalion commander might well want to lay a short length of cable from his H. Q. to a reserve company. The order "Cable will not be laid" might be read too literally. The above provides a good example of the care which must be taken in wording orders, and shows that many pitfalls into which the uninstructed and unwary may fall.

Always remember that Signals themselves will be issuing the detailed orders on which Signals will act, and that the inter-communication paragraph is merely that portion of these detailed orders which it is necessary for all recipients to know.

TERMINATION OF AN OPERATION ORDER.

Instructions for the Drafting of Orders, Instructions, Reports and Messages—1927, Section 6, para. 3—10.

Acknowledge.

A ————— B
Col. G. S.

X. Method of issue and time.

Distribution.

X. *Time.*

The time is that at which the orders are actually issued from the office of origin.

Distribution.

The distribution list should be in logical sequence, *e.g.*—

Own formations and units.

Own subordinate commanders and services.

Own commander.

Own staff.

Attached troops.

File and War diary.

Formations and units co-operating.

The importance of the "Acknowledge" is shown by the fact that this invariably has a main heading to itself.

The order is always signed by an officer of the General Staff, and in smaller schemes, dealing with the Brigade Group, by the Brigade Major.

Method of Issue and Time.—This may very often be important in the examination room as it will show whether the candidate has a knowledge as to how orders are got out to units, and whether he is practical in his methods. Orders issued by *formations* are as a rule "issued to Signals at ———— hours," or if the order is very important

it may be "issued by S. D. R. at—hours." Units, on the other hand, will generally terminate their orders with "issued by runner at—hours," or "dictated to company commanders at—hours." Normally, with a mixed force of all arms, Signals are entirely responsible for the method of issue.

Distribution and Copy No.

The distribution list should appear on all copies of the order so that recipients may know what formations and units have received copies. Maps and appendices should be marked with the same copy number as the order to which they are attached.

In practice long distribution lists are seldom sent. Distribution lists, made out as suggested above, give the complete order of battle, and this is dangerous in the event of copies of the order falling into the hands of the enemy. Also the copying of distribution lists takes up valuable time. Lists are therefore maintained on which the various addresses are grouped. These lists are issued beforehand to all concerned. Orders, therefore, generally terminate with "issued to list X," or if none of the lists fit the occasion they may terminate with "issued to list X, R. A. F. and Armoured Cars", or "issued to list X less Lincolns". This often saves a lot of time in the examination room; and, unless full distribution lists are specially called for, candidates are advised to use this shortened termination. A normal termination to orders to a Brigade Group formation, such as one usually has to deal with in the examination room, would be as follows:—

Acknowledge.

J. J. JONES, CAPT.,
B. M., 1 Inf. Bde.

Issued to Signals 1600 hrs.

Copies to list X.

IV.—MESSAGE WRITING.

Instructions for the Drafting of Orders, Instructions, Reports and Messages, 1927, Appendix "A" must be closely studied in connection with message writing and the preparation of messages for despatch by Signals.

An example of the message form at present in use is also shown in Appendix "B" of that pamphlet.

The message form is used for a variety of purposes, *e.g.*—

1. Orders for minor operations, *e.g.*, a battalion attack.
2. Warning Orders.

3. Reports on situations.
4. Ordinary messages, *e.g.*, requests for fire support, demands for ammunition, rations, etc.

In the examination room a message pad will not be provided, but such orders, reports and messages as would in practice have been sent in message form, should in the examination room be set out in the same form. (That portion of the message form which is for completion by Signals need not of course be reproduced).

In the copy of the message which is prepared by the Staff and handed in to Signals all addressees are included in the To spacing, no matter whether they are to take action or whether they are merely addressed for information. When Signals transmit the message only one unit or formation will appear in the To spacing. For this reason when the sender desires to inform the different addressees that a message has been circulated, he will include this information at the end of the Text. In the delivered message this is the only place where the complete list of addressees will appear. A message will terminate thus ADDSD 1 DIV. 2 DIV. 4 CAV. BDE OR ADDSD LIST X; or if the message requires action from the 1st Div. only and is to be sent to the others for information, it will end thus—

ADDSD 1 DIV. RPTD. 2 DIV. 4 CAV. BDE.

On no account are messages to be addressed to "All units" or is "Addsd all units" to appear at the end of the Text.

In the From spacing the unit or formation from whom issuing should be placed, and not the appointment of the issuing officer, *e.g.*—

From O. C. 1 INF. BDE. is wrong

From 1 INF. BDE. is correct.

The location of the addressee should not be stated in the To spacing, nor that of the issuing authority in the From spacing.

It is very important to have a knowledge of the ordinary abbreviations. The Army List abbreviations of units need not be studied. No examiner can expect a candidate to have these in his mind, but the correct abbreviations for Division, Brigade, Regiment, Battalion, Battery, Squadron, etc., should always be used.

NOTE.—The Operations section is distinguished by the letter O. This distinguishing letter applies to formations higher than the Brigade. Messages issued under the signature of Brigade Majors of Brigades have the letters B. M. as a prefix to the sender's number.

In the body of the message words must be economised. Anxiety to economise words, however, must not detract from the clarity of the order. The following is an example of a bad message. The Infantry Brigade Commander required to see all his unit commanders prior to committing his brigade to action. The message he sent was as follows :—

To	All units.
From	Gen.
Text	Come here.

Nothing could be worse. It is incorrectly addressed. No one knew where to report, and unit commanders would have been quite justified in moving with complete units.

NOTE.—No signal message ever begins “reference your,” on the message form there is a special space for “in reply to”, and this should be used for references.

Warning Orders.

If detailed orders cannot be issued till late in the evening for any action which is required to be taken early next day, great inconvenience will often be prevented by the issue of a preliminary warning order over night. In order to avoid disturbing the rest of subordinates, it may sometimes be advisable, especially when the force is widely scattered, to confine this order to sufficient instructions to enable any necessary preparations to be made, and to issue the more detailed orders next morning.

The preliminary order should state where and when the complete order will be issued.

In theory a warning order is sent whenever general orders for the following day cannot leave before 1800 hours.

A warning order sent in the form of a message should always commence with *warning order* in the text. Troops as a rule require to know the hour at which they will be required to move. Often combined with the warning order there is a summons for unit commanders to attend a conference.

Example.

Warning Order AAA Advance continues tomorrow AAA Adv
Gd A Sqn 10 H. Dorsets B Bty. RHA moves 0700 hrs AAA O C
units will attend conference Bde HQ 2000 hrs to night AAA order
issues 2100 hrs AAA Ack.

THE USE OF ABBREVIATIONS IN MESSAGES, ORDERS, NARRATIVES, ETC.

It is most important to use only the authorized abbreviations in message writing, and in all orders which are to pass by wire.

In written operation orders, however, abbreviations are not so important. In a written order, for example, it may be immaterial as to whether you write 1st Division or 1 Div. ; or whether you head your order 1st Infantry Brigade Operation Order, or 1 Inf. Bde. Operation Order. But if abbreviations are to be used in a written order they must be used correctly and consistently. It is most annoying to see a unit first of all referred to as "1st Field Amb.", and then later in the same order as "1 Fd. Ambulance." Never mix abbreviations in indicating a unit when writing orders. Either give a unit its full title or its correct abbreviated title, *i.e.*, either write 1st Infantry Brigade or 1 Inf. Bde. (1st Infantry Brigade or 1 Inf. Brigade is to be avoided).

If orders are being got out against time, it is most important to use abbreviations, and every surplus word must be cut out to assist in typing and duplication.

In answering questions in an examination paper, *i.e.*, not actually in the form of orders, in setting tactical schemes or in writing narratives, etc., more licence is allowed in using abbreviations. If you look through the tactical schemes set for Promotion and Staff College examinations you will notice all sorts of mixed abbreviations (*e.g.*, 1st Fd. Battery, R. A., 1st Bn. Middlesex Regiment, etc.). Generally speaking in writing narratives, setting schemes, or answering general questions the full titles of units should be stated, but in the examination room where time is all important the full titles of units can hardly be expected from candidates, and yet on the other hand, the full abbreviated titles appear too abrupt. To sum up therefore candidates are advised :

1. In writing messages to be very careful to use the correct abbreviated titles.
2. In writing operation orders and instructions to use either the full title or the correct abbreviated title.
3. In writing narratives or answering general questions use of the full title is correct, but a certain amount of licence is permissible in the examination room, and mixed abbreviations are excusable.

In the narratives of the schemes given in Chapter VI of these notes many mixed abbreviations are used. In the operation orders and instructions an attempt has been made to use either full title or correct abbreviated title.

In the messages, only correct abbreviations have been used.

Orders in Telegraphic Form.

The methods of issuing orders generally recognized are :—

1. To issue a full operation order.
2. To issue orders as a signal message.
3. To issue orders verbally at a conference.

These are the methods which require study for examination purposes.

There is yet one other method of issuing orders for urgent operations which requires separate study, *i.e.*, the issue of urgent operation orders in telegraphic form. This method is becoming increasingly popular and requires constant practice. Its use and application, however, are more a matter for trained staff than for serious study for examination purposes. The method is not mentioned in F. S. R.

The order in telegraphic form is a cross between a full operation order and an order written in message form. It is written without any of the headings or normal spacings and in abbreviated English. This economises space and paper, and for this reason duplication of copies and quick issue are facilitated. Such orders are usually headed Emergency Operations and sent out by S. D. R.

AN A. F. (I) ANNUAL CAMP.

By

MAJOR P. PENN, 2/10TH GURKHA RIFLES.

The 2nd Battalion of the B. B. & C. I. Ry. Regiment held their Annual Training Camp at Neemuch from 22nd November to 3rd December 1927. This article and the notes therein are written with the object of exchanging ideas with other A. F. (I) units on the subject of training, and to bring to the notice of officers of the Regular Army in India what the A. F. (I) is, and what it is meant to do. It is just as well, therefore, before proceeding further, to publish one or two extracts from official books, and so give an idea of what the A. F. (I) is for, what is expected of it, and on what principles it should be trained.

A. F. (I) Regulations paras, relating are :—

“ 85.—The training of the Auxiliary Force will be based strictly on the duties likely to be required of it in the event of an emergency necessitating the calling out or embodiment of the Force under the Act. These duties must differ to a certain extent according to the various conditions ruling in different parts of India.”

“ 86.—Subject generally, therefore, to local conditions, the training of the Auxiliary Force should be confined to—

- (a) Attaining thorough efficiency in the use of the weapons with which armed.
- (b) Reconnaissances and guard duties.
- (c) Attack and defence of localities, such as strong points, bridges, watering places, railway stations, etc.
- (d) The action of escorts to non-combatants, treasure, prisoners, etc.
- (e) Street fighting.
- (f) Technical duties of the unit.”

“ 87.—Training in drill and handling of arms will be restricted within the limits necessary for the proper performance of the special duties of each detachment, but it must be remembered that steady drill for short periods is the surest method of inculcating the spirit of discipline. Proficiency in rifle shooting, march discipline, military hygiene and camp duties must be insisted on for all ranks.”

Training and Manœuvre Regulations, page 10 (for India only) :—

“Units of the Army in India in turn, and all the A. F. (I) are detailed for the preservation of internal order and support of the Civil Power, and the units so detailed should be regularly exercised in the special work likely to fall to them. At the same time it must be remembered that it is impossible to prepare beforehand a scheme suited to every eventuality. The guiding principles should be that the commander of a protecting detachment must keep his command at all times ready for action.

The A. F. (I) are an important and integral part of the armed force in India and their special role is to co-operate with the civil authorities in the maintenance of order. It is important that their tactical training should be such as to suit them for this duty.

The varying conditions under which auxiliary force corps may be employed must be remembered. The duties likely to fall on a corps in a large city would be quite different from those of a mounted corps in a planting district, while the special duties of railway corps would be chiefly those connected with the defence of their railways, *e.g.*, patrolling the line, providing garrisons for railway posts, such as bridges and railway stations, and the manning of guns and machine guns on armoured trains.

It is important to interest the local civil and public authorities in such training, and to arrange from time to time for military duties such as military police battalions to share in such exercise. The A. F. (I) is the medium through which the British non-military inhabitants may be trained to arms and fitted for occasions of emergency.”

It may be observed that the battalion forming the subject of this article is a railway battalion based on Ajmer with outstation detachments as shown on the plan below. The figures represent the strength at stations :—

Each station underlined has a Staff Sergeant Instructor who visits regularly two days a week the smaller stations. Each station has its own small “defence scheme” and is self-contained for arms, equipment and ammunition.

Six months before camp the battalion had no officers who had passed the examination for "Fitness for Command," so opportunity was taken to coach up 5 Majors and get them to pass the examination. This coaching took the form of about ten to twenty individual T. E. W. T.'s and four other T. W. E. T.'s under battalion arrangements in which all Unit Commanders down to Platoon Sergeants took part. The Superintendent of Police and Superintendent, Government Railway Police, also attended, and so the commencement of a liaison was formed. A good start was thus made, and the senior officers of the battalion got into close contact with civil unrest problems and situations. Moreover being examined in the "Fitness for Command" examination by a Board of Senior Regular Officers gave these Field Officers confidence in themselves, and indicated to them the sort of A. F. (I) work that would be expected of them.

As has been said all officers and non-commissioned officers down to Platoon Sergeants attended 4 of these exercises and were practised in the rapid issue of orders and to think in a military sequence of thought :—

Information.

Intention.

Execution.

Administration.

Inter-communication.

Each situation in turn was examined under the eight principles of war, the application of which are just as important in civil unrest as in any other form of military duty.

Without the above mentioned preliminary training it would have been unwise to set out and compile a camp programme based entirely on what is expected of the A. F. (I). Such a programme is given in full (Appendix I) and on a narrative which was attached thereto each Battalion Commander of the day in turn carried on, compiled his own story and ran his own show. He also published battalion orders of the day, issued his own administrative instructions and orders to "fit in" with the scheme and settled Battalion routine to agree with the day's work. This left the C. O. free to act as a director, and to be able to move about, and see everyone at work. It also presented him with an opportunity of gauging the fitness of his senior officers to command a body of troops should the opportunity arise.

The "busy" spirit in camp was excellent and all officers had to think, and then work. The daily routine of a little arms drill, extended order drill and battalion ceremonial drill died its natural death. "Shirtsleeves" was the order of dress for the day.

The inspection by the General Officer Commanding was on the 28th November when the scheme scheduled for that day was carried out, and it is as well to bring to notice para. 118 of A. F. (I.) Regulations, especially the four lines in block capitals:—

"Every unit of the Auxiliary Force will be inspected annually under arrangements made by the officer commanding the district. The inspection should be held at such time and place as may ensure the largest possible attendance, and for this purpose, early notice of the date fixed should be given to the unit. **"THE OBJECT OF THE INSPECTION IS TO ASCERTAIN THE FITNESS OF THE UNIT FOR THE DUTIES IT MAY BE REQUIRED TO PERFORM AND TO TEST THE EFFICIENCY OF THE OFFICERS FOR THE DUTIES REQUIRED OF THEM."** The report of the inspecting officer will be made out on India Army Form I—1145. The remarks of the inspecting officer are confidential and only so much as is considered desirable will be published in the orders of the unit."

The G. O. C. saw the battalion arrive by train at Neemuch station, put the station in a state of defence, actually repair a 50 yards' breach in the permanent way and entrain ready to return to its base or to another "unrest" area. There was no march past. The scheme for this day being organized by the Battalion Commander of the day and issued by him.

The Commissioner spent 24 hours in camp and watched all work on the 30th November. Nothing but good can be the outcome of such liaison, and it is just as well for him to see at work the troops he may be required to use. The Superintendent of Police came into camp and took part in all during the last week. This gave him an opportunity of acting as the liaison officer between the Police and A. F. (I.) and to ascertain the ideas of the senior officers of the A. F. (I.) regarding co-operation between themselves and the Police. The Superintendent of Government Railway Police attended the last 4 days in camp, and took an active part in all work, thus affording him a similar opportunity.

A few observations on the subject of "conferences." They are most essential, and every military matter should be touched on, yet it is noted that the official manuals supply all the necessary information, *e.g.*, all matters for the first day's conference on arrival in camp are laid down in F. S. R., Vol. II, Chapter XIII, paras. 180, 182, 183, 186, and it is just as well to be guided by these manuals in preference to ideas formed on the spur of the moment.

When compiling "conference notes" it would be well to refer to the headings mentioned in Appendix II, "Manual of Operations on the North-West Frontier of India." A conference of all officers under the Director was held on the completion of each day's work, and in addition to constructive criticisms offered at the time the work was actually in progress.

A word or two about the Demonstrations. The first one 10-15 to 11 a.m. on 24th November to the whole battalion, was simple enough and carried out by a body of 12 men representing an escort to ammunition passing through a main street of a town. The remainder of the battalion represented a rioting band and each step of the procedure in conjunction with the Magistrate was explained, demonstrated and discussed and the "why and wherefor" carefully gone into. Disposal of casualties also received due consideration.

The "Model Musketry Training Lesson" was given by the best Staff Sergeant Instructor and just showed how much could be done in 40 minutes.

"Taking over a Public Office" was done by a platoon and represented a platoon arriving and preparing for a tour of duty for 24 hours at a post office. Not such an easy task and reasonably difficult to organize with no previous thought or training experience.

The demonstration of "The Motor Car as a Tactical Unit" was carried out by a section, the remainder of the company being the enemy, the camp cross-roads representing the scene of action. In cases of this sort such points as a man to be detailed as the shadow of the civilian driver are apt to be overlooked unless actually practised.

The "Organization of an Examining Post" was amusing, but nevertheless instructive, and easily within the scope of every member of the A. F. (I.). It represented the entrance to a Cantonment area. The actual "passers by" presented varied opportunities for practice.

The Fire Power of the Infantry Weapon showed :—

- (a) What 6 riflemen can do.
- (b) What 2 men with a Lewis gun can do.
- (c) What 2 men with a Vickers gun can do.

Time was found for two short periods of battalion drill, but full opportunity was always taken when moving formed bodies of troops to exercise them in marching to attention, march discipline, etc.

For the final day's work all officers above the rank of Captain and all Sergeants were made casualties. This formed a successful test for the junior officers and N.-C. Os. of the battalion.

The camp was pitched and maintained on a "pukka" perimeter pattern. There were no flies in camp and the Battalion Medical Officer set and maintained throughout an energetic example of preventive measures in camp hygiene. Daily sick was but 3.2 per cent. Admission to hospital 1 per cent., average daily strength in camp 420 officers and 400 men.

APPENDIX I.

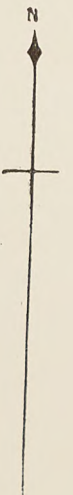
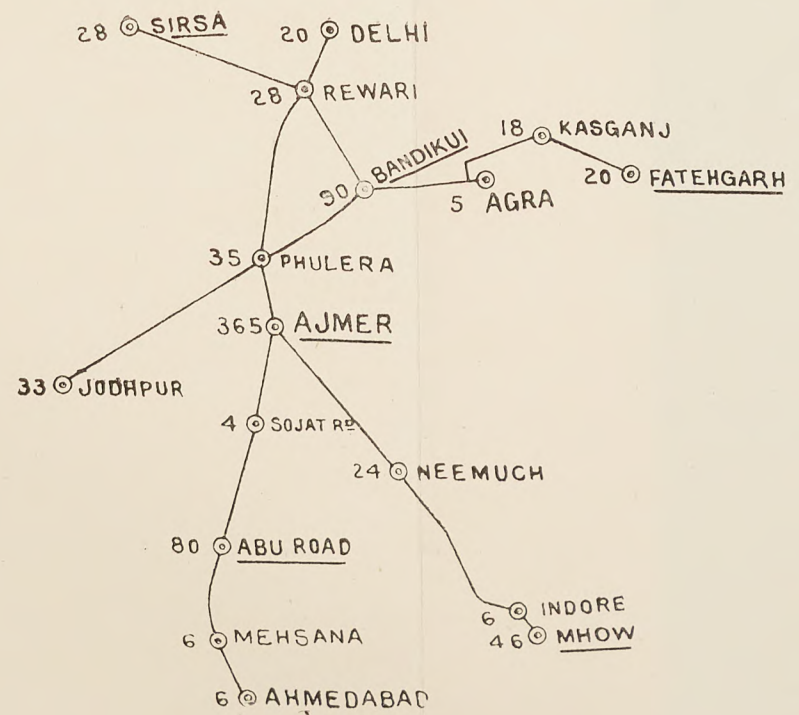
2nd Bn., B. B. & C. I. Ry. Regiment, A. F. (I.).
ANNUAL CAMP 1927.

NEEMUCH, 22nd November—3rd December.

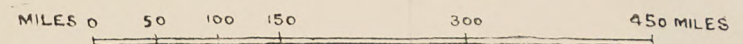
Director of Training.—Lieut.-Col. W. S. Fraser, O.B.E., V.D., Commanding, 2nd Bn., B. B. & C. I. Ry. Regt., A. F. (I.).
Assistant to Director.—Major P. Penn, 2/10th Gurkha Rifles, Adjutant, 2nd Bn., B. B. & C. I. Ry. Regt., A. F. (I.).

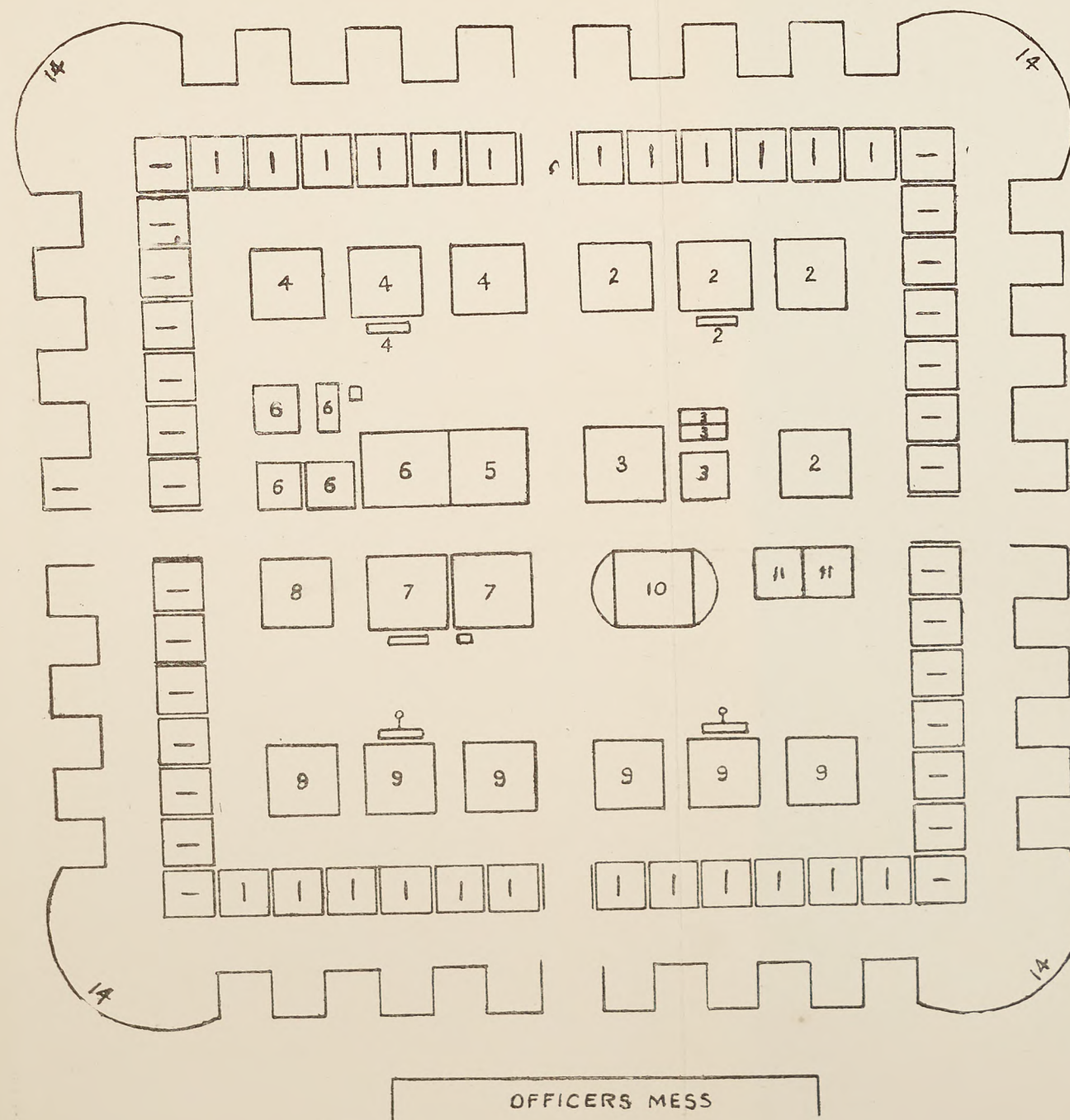
Date.	Battalion Commander of the Day.	Adjutant to Battalion Commander.	COMPANY COMMANDERS.		
			" A " Company.	" B " Company.	" C " Company.
23rd November.	Major H. Armitstead, M.B.E., V.D.	Lieut. C. Twynam.	Capt. V. N. Rowsell, M.C.	Capt. A. Y. Storrar.	Capt. P. S. Clarke, M.C.
24th "	" N. Marryat, V.D.	" C. Twynam.	Major H. Armitstead, M.B.E., V.D.	Major C. G. Cotesworth, V.D.	" P. S. Clarke, M.C.
25th "	" N. Marryat, V.D.	Capt. P. S. Clarke, M.C.	Capt. V. N. Rowsell, M.C.	Major C. G. Cotesworth, V.D.	" C. M. Rennick.
26th "	" E. C. H. Condon, V.D.	" J. N. A. James.	" V. N. Rowsell, M.C.	Capt. A. Y. Storrar.	" C. M. Rennick.
27th "	" H. Armitstead, M.B.E., V.D.	Lieut. G. E. H. Williams.	Lieut. A. J. Kendrick.	" A. Y. Storrar.	" J. N. A. James.
28th "	" C. G. Cotesworth, V.D.	" G. E. H. Williams.	Major H. Armitstead, M.B.E., V.D.	Major N. Marryat, V.D.	" J. N. A. James.
29th "	" N. Marryat, V.D.	" R. A. Tarleton.	Major H. Armitstead, M.B.E., V.D.	" C. G. Cotesworth, V.D.	Major F. J. H. Sievwright, V.D.
30th "	" F. J. H. Sievwright, V.D.	" R. A. Tarleton.	Major H. Armitstead, M.B.E., V.D.	" C. G. Cotesworth, V.D.	Lieut. G. E. H. Williams.
1st December.	" E. C. H. Condon, V.D.	Capt. J. N. A. James.	Capt. A. Y. Storrar.	Major C. G. Cotesworth, V.D.	Major N. Marryat, V.D.
2nd "	" F. J. H. Sievwright, V.D.	Lieut. P. D. Mitton.	Major H. Armitstead, M.B.E., V.D.	Capt. J. N. A. James.	" N. Marryat, V.D.
3rd "	" F. J. H. Sievwright, V.D.	" P. D. Mitton.	Major H. Armitstead, M.B.E., V.D.	Major C. G. Cotesworth, V.D.	" N. Marryat, V.D.

Day.	Work to be done.	Voluntary A. F. (I.).	Games.	Concert, etc.
6th Day. Sunday. 27th November, 1927.	Church Service as ordered. Officers Revolver Competition. Officers Conference as ordered.	Battalion Shoot 200× Rapid. 300 ^r Snaphooting.	Wrestling. 1/3rd Sikh Pioneers <i>Versus</i> 10/6th Rajputana Rifles. Hockey. 10/4th Bombay Gre- nadiers <i>Versus</i> 1/3rd Sikh Pioneers.	Band Concert by 2nd Bn., B. B. & C. I. Ry. Regt.
7th Day. Monday. 28th November, 1927.	07-00 to 08-00 hours Disposal of Company Commanders. 09-00 to 11-00 " .. Reconnaissance and Patrolling $\frac{1}{2}$ of a length of line (To practice in- terior economy arrangements. Dinner to be prepared on the ground.) 11-30 to 12-30 " { "A" Company.—Lecture and Demonstration "Taking over a Public Office" (To protect clerical staff). "B" Company.—Lecture and Demonstration "The Motor Car as a tactical unit." "C" Company.—Lecture and Demonstration "Organization of an Examining Post." 14-00 to 14-30 " .. Officers Conference under Direc- tor.	Miniature Range. Competition.	Wrestling. 10/4th Bombay Gre- nadiers <i>Versus</i> 1/3rd Sikh Pioneers.	Wireless Concert. Cinema.



ROUGH SCALE 150 MILES = 1 INCH





SCALE 1"=20 YARDS

1	MENS TENTS
2	"C" COMPANY SERGTS
3	HOSPITAL, BHISTIES AND BLUE LAMP ROOM
4	"A" COMPANY SERGTS
5	QUARTER GUARD
6	QUARTERMASTER STORES TAILOR LAMP STORES BUNIA AND DHOBI
7	C.O., ORDERLY ROOM AND CLERKS
8	REGTL SERGT MAJOR
9	"B" COMPANY SERGTS
10	ADJUTANT
11	KHALASSIES
12	WASHING PLACES
13	LATRINES
14	PERIMETER

12

13

200 X FROM N. 1.

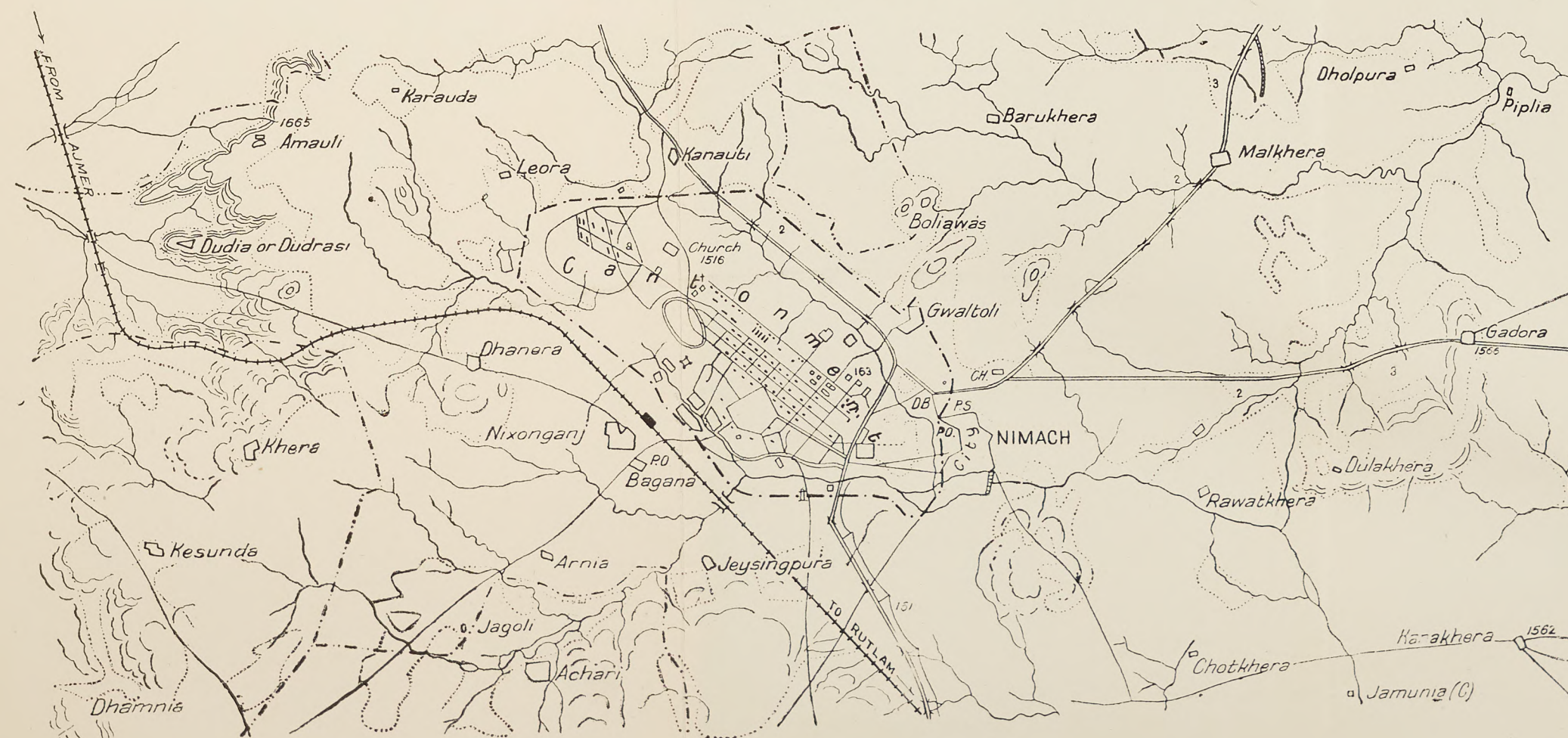
8
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

2ND BN B.B. & C.I. RY REGT. A.F. (I).

TACTICAL MAP, ANNUAL CAMP OF EXERCISE 1927

Scale 1 inch = 1 mile.
Furlongs 8 4 0 1 2 3 4 5 Miles

Note - Cantonment Area shown thus - - - - -



Day.	Work to be done.	Voluntary A. F. (I).	Games.	Concert, etc.
10th Day. Thursday. 1st December, 1927.	07-00 to 08-00 hours .. Disposal of Company Commanders. 09-00 to 11-00 " .. Organization of NEEMUCH FORT as a "KEEP." 12-00 to 12-40 " .. Putting picquets out on a march in an affected area. 14-00 to 14-30 " .. Officers Conference under Director.	Battalion Shoot 500x Slow.		Wireless Concert. Cinema.
11th Day. Friday. 2nd December, 1927.	07-00 to 08-00 hours .. Disposal of Company Commanders. 09-00 to 12-00 " .. Clearing up a Civil Area which is being looted. 12-15 to 13-00 " .. Lecture "Internal Security Schemes." 14-00 to 14-30 " .. Officers Conference under Director.			Wireless Concert. Cinema.
12th Day. Saturday. 3rd December, 1927.	Break Camp.			

NOTES ON 'Q' ORGANIZATION FOR WAR, (INDIA).

By

CAPTAIN G. N. MOLESWORTH, THE SOMERSET LIGHT INFANTRY.

In dealing with the subject of 'Q' organization for war, I have classified these notes under 3 main heads :—

Part I.—*General Remarks.*

Part II.—*Organization in the Division and Cavalry Brigade.*

Part III.—*Organization on Line of Communications.*

PART I.—*General Remarks.*

1. Many years ago a wise man recorded his opinion that of the making of books there is no end and much study is a weariness of the flesh. There are few soldiers to-day who will not cordially endorse this opinion. And since the making of books continues without end and flesh grows daily more weary with study, I have endeavoured in the following pages to put together a few notes which may serve to lighten the labours of candidates for Military Examinations, or those who may be athirst for professional knowledge. It is an unfortunate fact that the details of 'Q' organization for war are contained in many books and it is not always easy to piece the various portions together so as to obtain a clear picture of the whole.

2. In reading these notes it must be remembered that they are merely a statement of the organization for India, and are not a criticism of that organization, nor is any comparison made between the Indian and Home systems. Generally speaking, there is no radical difference between the two systems. In actual practice, certain differences of detail occur. This is inevitable in view of differences of composition in units of the British and Indian Services, and the special conditions of climate and terrain which have to be faced in India. There seems to be an idea that 'Q' organization is extremely complicated and difficult to understand. This perhaps is because the majority of officers have few opportunities to observe the working of 'Q' services in peace. Once the principles of 'Q' organization are grasped, however, they will be found perfectly simple and intelligible, and for the majority of officers there is no necessity to examine minute details. There is much in the following notes which many readers will consider elementary. This is admitted, but on the other

hand, from a perusal of Promotion Examination Papers and Schemes for "Backward Boys", it seems probable that there are not a few officers who may find the information of value.

3. Generally speaking all 'Q' organization can be grouped under two heads :—

(a) Maintenance.

(b) Movement.

The full details of the Q. M. G's. duties in war are contained in Chapter VII, F. S. R., Volume I.

For the purposes of these notes we may define "Maintenance" briefly as follows :—

- (i) *I. A. S. C. duties.*—Supply of rations, grain, fodder, firewood, petrol, oil and lubricants: supply of M. T. vehicles and M. T. stores: Repair of M. T. vehicles.
- (ii) *I. A. O. C. duties.*—Supply of equipment, clothing, boots, tentage, ammunition, explosives and signal stores: Repair of ordnance equipment and horse drawn vehicles.
- (iii) *M. E. S. duties.*—Supply of engineering stores, material for construction, hutting, etc.
- (iv) *I. A. V. C. duties.*—Evacuation and care of sick and wounded animals and supply of veterinary stores.
- (v) *A. R. D. duties.*—Supply of animals of all kinds.
- (vi) Administration and employment of Labour.
- (vii) Canteens and Postal Duties.

Under the heading of "Movement" is included moves of all kinds by road, rail, sea and inland waterway.

4. Thus the Quartermaster General's Staff and Services grouped under the following main heads :—

- (a) Movements and Quarterings.
- (b) Supply and Transport.
- (c) Equipment and Ordnance Stores.
- (d) Veterinary.
- (e) Remounts.
- (f) Military Engineering Service.
- (g) Labour.
- (h) Canteens.
- (i) Postal.

PART II.—*Organization in the Division and Cavalry Brigade.**A.—Divisional Organization.*

1. To deal with the duties referred to in Part I, para. 4 of these notes, the Divisional Commander has the following Staff:—

Staff.

1 A. A. and Q. M. G.

1 D. A. Q. M. G.

Services.

1 D. A. D. O. S.

1 D. A. D. V. S.

2 Executive Veterinary Officers.

Supply and Transport duties are performed by:—

The O. C., Divisional Train.

The Senior Supply Officer (with Div. Train).

2. The units for supply within the Division are as follows:—

(i) *The Divisional Ammunition Column.*—For carriage and supply of 18 pr., and 4·5" How. ammunition.

(ii) *The Indian Pack Artillery Brigade Ammunition Column:* for carriage and supply of 3·7" How. and 2·75" gun ammunition.

(iii) *The Divisional Train:* which includes S. A. A. Sections.

(iv) *The Mobile Veterinary Section.*

(v) 4 *Field Post Offices.*

Of these the Divisional Train, the Mobile Veterinary Section and the Field Post Offices only are 'Q' units. The replenishment of the Ammunition Columns, however, is a duty of the 'Q' Staff.

3. *The Divisional Train.*

(i) As the Divisional Train forms the backbone of 'Q' organization within the Division it will be as well to consider it first. More detailed information on this subject can be obtained from War Establishments (India), Vol. I, and the Field Service Manual of the unit.

(ii) The Train consists of:—

1 Train Headquarters.

6 Train Companies, numbered 1 to 6.

(iii) The Train is provided with Animal Transport and is not yet mechanized.

(iv) The Headquarters consists of :—

An O. C. who is the Chief Executive Officer for Supply and Transport duties with the Division.

A Senior Supply Officer for supply duties.

An Adjutant and Staff.

(v) Nos. 1, 2 and 3 Companies are Divisional Troops Transport Companies. Nos. 4, 5 and 6 are Infantry Brigade Transport Companies.

(vi) No. 1 Company :—

Supplies 1st Line Transport for the I. P. A. Brigade, A. C., and the D. A. C.

Supplies Transport for the 3 S. A. A. Sections.

(The personnel to handle the S. A. A. is supplied by Infantry Brigades and is attached to this Company):

Carries fodder for these units.

(vii) No. 2 Company :—

Supplies 1st Line Transport, Transport for Baggage and Supplies and Transport for fodder for :—

Headquarters Units.

Signals and Pioneers.

Medical and Veterinary Units.

Furnishes the Supply Issue Section and Bakery and Butchery Sections for all Divisional Troops.

(viii) No. 3 Company :—

Supplies 1st Line Transport, Transport for Baggage and Supplies, and Transport for fodder for :—

Field Artillery Brigades.

Pack Artillery Brigade.

Sapper and Miner Units.

(ix) Nos. 4, 5 and 6 Companies (each) :—

Supply 1st Line Transport, Transport for Baggage and Supplies, and Transport for fodder for :—

1 Infantry Brigade Headquarters.

1 Indian Infantry Brigade.

Furnish a Supply Issue Section and 2 Butchery and 2 Bakery Sections.

(x) Thus to recapitulate:—

(a) Nos. 1, 2 and 3 Companies provide as follows for all Divisional Troops:—

1st Line Transport:

A Divisional Supply Issue Section to handle supplies:

Bakery and Butchery Sections to provide bread and dressed meat for British troops:

Transport for baggage:

Transport for supplies and fodder.

In addition they provide transport for all S. A. A., grenades and fire works.

(b) Nos. 4, 5 and 6 Companies provide as follows for Infantry Brigades:—

1st Line Transport:

Supply Issue Sections to handle supplies:

Bakery and Butchery Sections to provide bread and dressed meat for British troops:

Transport for baggage:

Transport for supplies and fodder.

(xi) In actual practice the organization is elastic. That is to say, when Divisional Troops units are attached to Infantry Brigades, the Train Transport for these units may be attached to the Infantry Brigade Transport Company.

(xii) Generally 1st Line Transport remains with units, but baggage and Supply Sections of this Train are withdrawn to their Train Companies at night.

(xiii) As regards supplies, the Supply Sections of the Train are designed to carry one day's rations and fodder for all personnel and animals of the Division on intermediate operations scale. It should be remembered that the ration includes firewood for fuel. The object of Bakery and Butchery Sections is to provide bread and dressed meat for British Troops. Bakery Sections will frequently (when the Division is concentrated) be withdrawn under orders of the O. C. Train, to bake in some central place. Meat, normally is issued on the hoof.

(xiv) Normally no transport is allotted for tentage which, when operations stabilize, is sent up under arrangements made by the 'Q' Staff.

(xv) Special arrangements have to be made by the 'Q' Staff for canteen supplies and explosives. The latter are generally sent up to units through the S. A. A. Sections of the Train.

4. *The Mobile Veterinary Section.*—This is a small unit designed to take over cases which cannot be dealt with by Executive Veterinary Officers, Farriers, or Veterinary Assistant Surgeons with units. When the Division is not moving, the Mobile Veterinary Section holds minor cases, but normally all serious cases are passed back to the L. of O.

5. *The Divisional Ammunition Column and the Indian Pack Artillery Brigade, A. C.*—As pointed out in para. 3 of Section A. above, these are not 'Q' units and it is unsuitable to deal with their organization here.

6. *Ordnance Arrangements and Salvage.*—The D. A. D. O. S. is not intended to maintain a large stock of stores, equipment, clothing, etc. He has, however, 19 A. T. carts allotted to him (from No. 2 Company of the Divisional Train) for the carriage of Reserve Stores. Beyond this, he must keep his stocks to meet demands as fluid as as possible. 1 A. T. cart is allotted for salvage.

7. *Canteens.*—At present 7 A. T. carts are allotted for canteen supplies.

8. *General remarks on 'Q' arrangements within the Division.*—Generally the system in India follows the Home system.

(a) *Supplies*—

(i) Rations and fodder are indented for daily by O.'s O. Divisional Troops Supply Issue Section and Infantry Brigade Supply Issue Sections (B. S. O.'s). These indents are based on daily ration strengths from units and are submitted to the Senior Supply Officer with the Divisional Train. The latter, normally, indents on the Railhead Supply Officer. Rations are brought up daily by L. of O. Transport to Supply Refilling Point where they are taken over by the Supply Sections of the Divisional Train. If the Division is at a standstill, arrangements will probably be made to bake all bread and dress all meat at some central place. If the Division is moving, Bakery and Butchery Sections probably remain with their Train Companies. The Supply Sections of the Train after leaving Supply Refilling Point proceed to

meeting points where they are met by guides from units who take them up to the units. After handing over supplies to units, the Supply sections rejoin their Train companies. Normally, as units in India have no supply vehicles with 1st Line Transport, supplies are not handed over until the unit is in a position to commence cooking and distribution.

- (ii) *Petrol, oil and lubricants* are indented for and obtained in the manner as rations and fodder. Allowance has been made in Supply sections for transport for these articles.
- (b) *Ordnance*.—Indents from units are sent through Brigade staffs, or direct in the case of Divisional Troops, to the D. A. D. O. S., who places demands on Ordnance units at Railhead. The stores are sent up on L. of C. Transport.
- (c) *Ammunition and Explosives*—
 - (i) Gun and How. ammunition is applied for through the Headquarters, Divisional Artillery and the 'Q' staff of the Division, who estimate the amount required. The 'Q' staff then place demands on Ammunition Depots at Railhead. The Ammunition is sent up on L. of C. Transport to Divisional Ammunition Refilling Points. It is then taken over by the D. A. C. or I. P. A. Bde., A. C., who in turn, replenish units on demand.
 - (ii) S. A. A. grenades, fireworks and explosives for S. and M. units are similarly supplied. There is no definite Divisional transport allotted for explosives. When the necessity for supply arises, the 'Q' staff arrange for transport to be made available from S. A. A. sections.
- (d) *Veterinary*.—Animal casualties are dealt with firstly by Veterinary Assistant Surgeons or Farriers with units, or by the 2 Executive Veterinary Officers with the Division for units which have no Veterinary personnel. Minor cases remain with units. More serious ones are passed to the Mobile Veterinary Section and either held by them or evacuated to the L. of C. under the orders of the D. A. D. V. S.
- (e) *Replacement of animals*.—This is arranged by the 'Q' staff. Animals to replace casualties being sent up by the Remount Squadron on the L. of C. or at Railhead.

- (f) *Repair and replacement of M. T. vehicles.*—This is an I. A. S. C. responsibility. Any vehicles which cannot be repaired by unit personnel are sent back to the Mobile Repair unit on the L. of C. The functions of this unit are fully dealt with in Part III of these Notes. Replacement is made through advanced vehicle Reception Depots on the L. of C.
- (g) *Repair and replacement of Horsedrawn vehicles.*—This is I. A. O. C. responsibility. D. A. D. O. S. arranges for despatch of repairable vehicles to Ordnance Mobile Workshops on the L. of C. He also arranges for replacement of vehicles lost or irreparable.
- (h) *Canteen supplies.*—The organization of Brigade and Divisional Canteen Sections is now in the melting pot and unit contractors will accompany their units in the field. The 'Q' staff will arrange for canteen stores to be sent up with I. A. S. C. supplies and for issue to unit contractors under Divisional arrangements. Supply of canteen stores is not an I. A. S. C. responsibility.
- (i) *Postal arrangements.*—Each Brigade and Divisional Troops has a Field Post Office. Mails are sent up on L. of C. Transport to Supply Refilling Point and there issued to Supply sections of the Train for delivery to Field Post Offices.

B.—Organization of the Cavalry Brigade.

1. The system of supply follows that of the Division on general lines.

2. For 'Q' duties the following staff is provided :—

Staff.

1 Staff Captain.

Services.

1 Veterinary Officer.

1 Warrant Officer.

1 Staff Sergeant

} I. A. O. C.

Supply and Transport duties are performed by the O. C., Cavalry Brigade Train.

3. The units for supply are as follows :—

- (i) *The Cavalry Brigade Ammunition Column.*—This consists of a Horse Artillery Section and an S. A. A. Section. Transport for the latter is supplied by the Cavalry Brigade Train.

- (ii) *The Cavalry Brigade Train.*—This has not yet been mechanized.
- (iii) *The Mobile Veterinary Section.*
- (iv) *The Field Post Office.*

4. *The Cavalry Brigade Train.*

- (a) The O. C. is also Brigade Supply Officer.
- (b) The Train consists of—

- A Headquarters.
- A Supply Issue Section.
- 2 Bakery Sections
- 2 Butchery Sections.
- A Baggage Section (Transport).
- A Supply Section (Transport).

- (c) The Train provides 1st Line Transport (Pack and L. G. S. wagons) for all units of the Cavalry Brigade. It also provides drivers and animals for unit vehicles of the Cavalry Field Ambulance.

5. *General remarks on 'Q' arrangements within the Cavalry Brigade.*

- (i) As already stated, the general system follows that of the Division.
- (ii) The Cavalry Brigade Train draws supplies, etc., direct from S. R. P.
- (iii) Four A. T. carts are allotted to Cav. Bde. H.-Q. for reserve ordnance stores.
1 A. T. cart is allotted for canteen stores.
- (iv) As regards ammunition of all kinds, grenades, fireworks and explosives, the Cavalry Brigade Ammunition Column draws direct from A. R. P. It should be noted that for the Cavalry Brigade the S. A. A. sections are divorced from the Train and form part of the Ammunition Column.

PART III.—'Q' Organization on the L. of C.

1. 'Q' organization within the Division and Cavalry Brigade is comparatively simple. L. of C. organization is more difficult to comprehend by reason of its complexity and the enormous organization which the Q. M. G. controls. Once more I would refer to paras. 3 and 4 of Part I of these notes, which show the main headings under which the responsibilities of the Q. M. G. are classified. For the sake

of simplicity I will divide L. of C. organization under the headings of the duties performed by the various 'Q' services and departments. It must be remembered, however, that these services do not work in watertight compartments. They are each a component part of one system which is controlled and co-ordinated by the 'Q' staff. It cannot be said that one service is more important than another, since they are largely inter-dependent. The failure of any one service reflects adversely on the others.

Maintenance.

2. I. A. S. C. duties.

A. The L. of C. Pool of Transport.

- (i) The main backbone of the L. of C. in advance of Railhead is the L. of C. Pool of Transport.

Types of units employed in this unit are:—

M. T. companies.

Camel Transport Companies.

Mule Transport Companies.

Draught Pony Corps.

Hired Transport (country carts, pack mules, donkeys, M. T., etc.).

- (ii) In India no Maintenance Companies exist. Transport units, as above, are allotted to L. of C. as required, in accordance with the nature of the country through which the L. of C. passes. If good roads are available M. T. can be used. If roads are lacking Pack or Draught transport must be used. The Transport Pool is allotted by G. H.-Q. It is controlled and administered by Army H.-Q.
- (iii) The Transport Pool carries supplies and stores of all kinds between railhead and Divisions and Cavalry Brigades in the field. The allotment of transport for any particular type of stores or supplies is made under the orders of the 'Q' staff of the Army concerned.
- (iv) It may be useful to describe briefly some of the units involved in this Pool.
- (a) *The Light M. T. Company consists of—*
- A. Headquarters.
- 4 Sections.

Each section contains 33 lorries, of which 25 are working lorries and 8 are spare. The bulk of M. T., at present, utilize 30 cwt. lorries. Thus the lift of Light M. T. Section is $37\frac{1}{2}$ tons, while the lift of a Light H. T. Coy. is 150 tons. The 8 spare lorries per section must not be taken into any transport calculation as they are only used to replace working lorries under temporary repair. The normal run for M. T. per day is 50 miles, *i.e.*, 35 miles out and 25 miles back.

Normally M. T. should not work on the road more than 5 days per week.

(In the future the existing 4 wheel 30 cwt. lorries may be replaced by six-wheelers. But future organization is beyond the scope of these notes).

(b) *Camel Transport Companies*.—A Camel Transport Company consists of—

A headquarters.

8 Troops.

A camel normally carries 5 maunds. The lift of a Camel Transport Company is 4,125 maunds.

(c) *Mule Transport Companies*.—These may be used for Pack or Draught. They may consist of either 7 or 8 troops.

(d) *Draught Pony Corps*.—No Government Pony Corps exist at present, but their employment is always a possibility. They are an unsatisfactory form of transport.

(v) Before leaving the question of transport the question of Medical Transport may be touched on.

(a) The I. A. S. C. Supply Bullock Troops for Field Ambulances. They also supply Bullock Troops for British and Indian Staging sections (on L.'s of C. where no motor road exists) and Casualty Clearing Stations. These Bullock Troops are only "Ambulance Transport." That is to say, they provide bullock tongas for the carriage of sick and wounded. They do not carry stores, baggage or supplies.

(b) The I. A. S. C. Supply M. T. Companies which form part of Motor Ambulance Convoys, which are L. of C. units. These M. T. Companies provide "Ambulance Transport" which is distinct from transport for baggage, stores and supplies.

- (c) It must be understood that neither Bullock Troops nor M. T. Companies for M. A. C.'s form any part of the L. of C. Transport Pool.

B.—Supplies.

(i) The Supply units employed by the I. A. S. C. on L. of C. are as follows :—

- (a) *H.-Q. Supply Depot Companies.*

Supply Depot Headquarters.

Supply Depot Sections.

These work at main and advanced Bases.

- (b) *Supply Tally Sections.*

Supply Workshop Sections.

For work at main and advanced Bases as required. The Supply Workshop Sections are only for carpenters, tinsmith's work, etc., in Supply Depots and have no connection with any repair of equipment or M. T. vehicles.

- (c) *Railhead Supply Detachments* : for supplying troops passing through railheads.

- (d) *Local Purchase Sections* : for local purchase when required.

- (e) *Cattle Depot Headquarters.*

Cattle Depot Sections.—To take over cattle, sheep and goats from contractors and hold them for issue as required. A Cattle Depot Section is capable of dealing with 3,000 animals. A Headquarters is allotted to control 4 or more Depots (i.e., 12,000 animals or over).

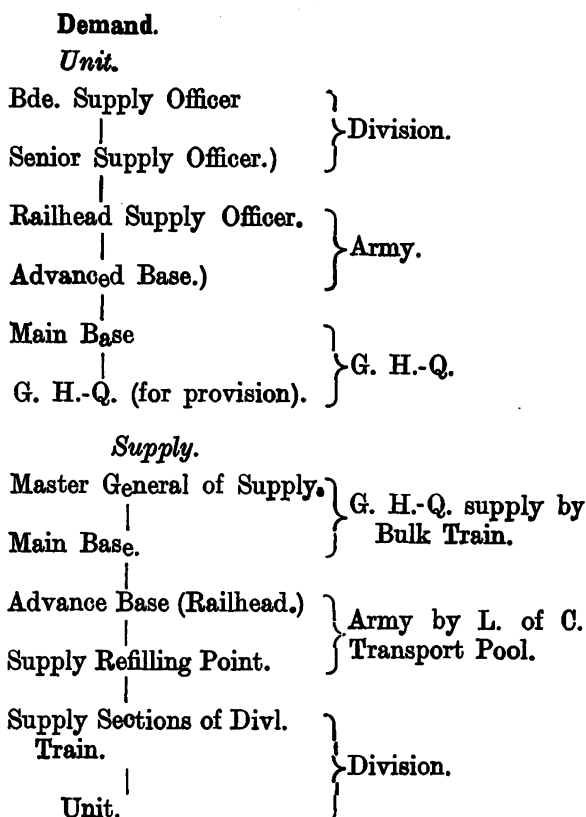
- (f) *Supply Sections.*

Butchery and Bakery Sections : for allotment to posts on the L. of C. as required.

(ii) In India elements of distance and climate, and the absence of the Maintenance Company link in the chain of supply, render supply by Pack Train a matter of great difficulty. Pack Train supply is not the normal method, though it may be introduced if circumstances are favourable. Normally supplies (including meat on hoof) are delivered in bulk to Railheads, where their detailed distribution becomes a responsibility of the Army. That is to say, the rations are made up daily and despatched under Army orders on L. of C. Transport to the troops in the field.

Petrol, oil and lubricants are supplied in a similar manner.

(iii) Thus, generally speaking the chain of demand and supply is as follows :—



NOTE.—The Advanced Base may or may not be located at Rail-head.

(iv) Supplies are "provided" in the first instance by the Master General of Supply, through his Directorate of Contracts and Farms. M. G. S. organization is outside the scope of these notes. It is sufficient to say that certain commodities are procured in India while others come from overseas through Base Ports.

The question is further touched on under the heading of 'Transportation'.

C.—Repair and Replacement of M. T. Vehicles.

(i) The units engaged in repair and replacement are as follows :—

(a) *Mobile Repair Units*: for minor repairs which cannot be undertaken by units which have no workshop on their establishment.

- (b) *Heavy Repair Shops*: under Army or G. H.-Q. control for major repairs and extensive overhauls.
- (c) *Advanced Vehicle Reception Depots*: consist of a Headquarters and 3 vehicle sections.

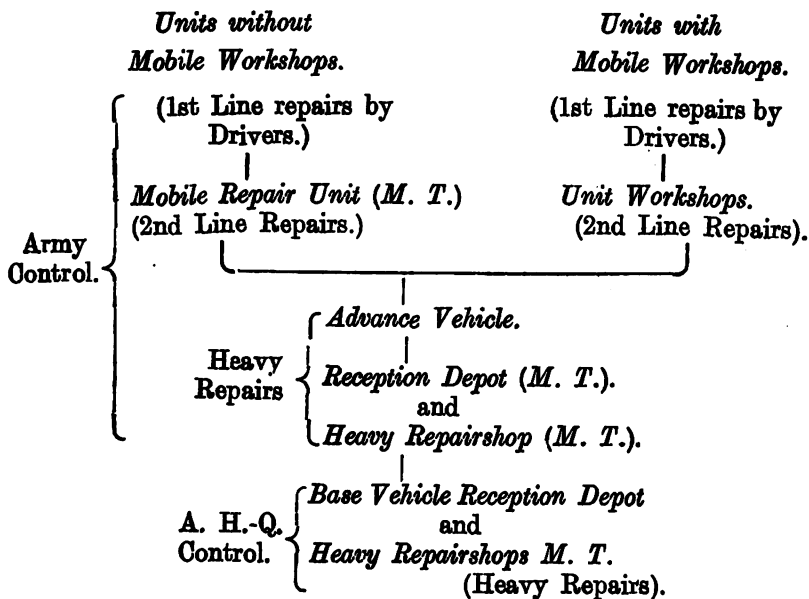
For:—

- (i) Reception, custody and issue of replacement vehicles.
- (ii) Carriage and custody of solid tyres and vehicle equipment.
- (iii) Pressing on of solid tyres.
- (iv) Providing breakdown gangs to retrieve M. T. vehicles.

The unit is designed to perform these duties for 1 Corps.

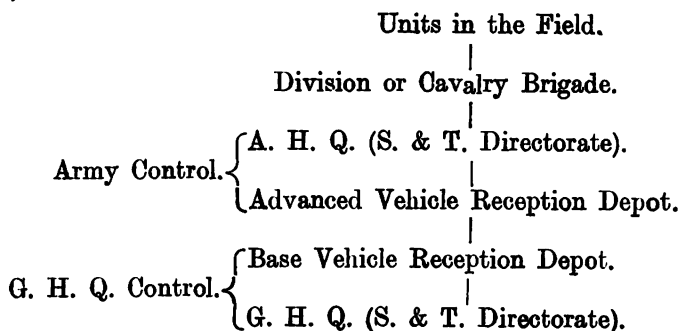
- (d) *Base Vehicles Reception Depots*: to receive vehicles from Heavy Repair Shops, M. T. Collecting Centres in India, and overseas.
- (e) *M. T. Collecting Centres*: for purchase of vehicles in India.
- (f) *Tyre Presses*.—These units are normally attached to other units of the M. T. Service.

(ii) Repair is carried out as follows:—

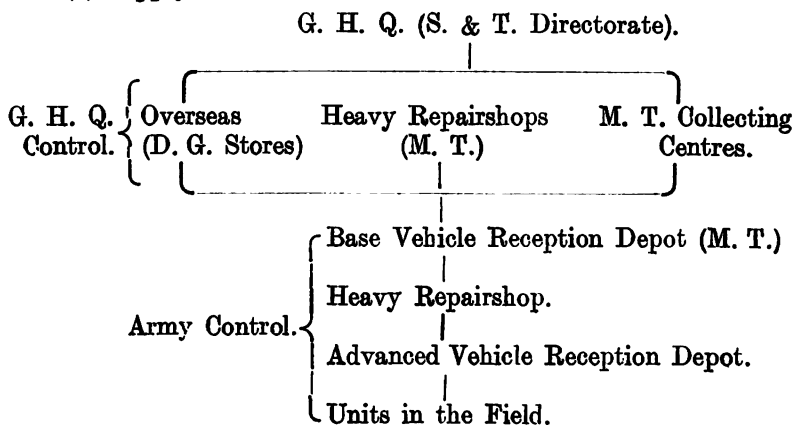


(iii) *Replacement* is carried out as follows :—

(a) *Demand.*



(b) *Supply.*



D.—Supply of M. T. Stores and Spare Parts.

(i) The unit of supply is the M. T. Stores Depot.

(ii) Units in the field indent direct on this Depot, which supplies direct.

(iii) The stocks in the Depot are replaced under orders from G. H. Q., through the M. G. S. and the Director-General of Stores (Overseas).

3. *I. A. O. C. duties.*

(i) The I. A. O. C. units on the L. of C. are as follows :—

General Stores Company.

Ammunition Section.

Ordnance Mobile Workshop.

Ordnance Base Workshop.

Anti-Gas Mask Repair Workshop.

(ii) General Stores Company.

- (a) This consists of a Headquarters and two Sections. Sections can be used on detached duty if necessary.
- (b) General Stores Companies are employed at Advanced Bases where they provide the personnel for "Ordnance Advanced Depots." They hold clothing and stores of all kinds with the exception of ammunition. The stores they hold are known as the "Ordnance Field Park" and are generally based on a fixed number of months supply for troops in the Field. This scale is fixed by G. H. Q.

(iii) Ammunition Sections.

These are designed to hold stocks of ammunition of all kinds and are located, as required, at Advanced Bases, Railheads and Posts on the L. of C. They provide the personnel for "Ammunition Depots."

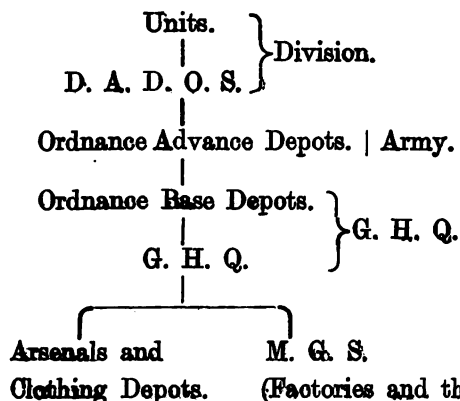
(iv) Ordnance Mobile Workshops.

These are generally located at Advanced Bases and undertake minor repairs of equipment, vehicles (other than M. T.), guns and carriages, etc.

(v) Ordnance Base Workshops and Anti-gas Mask Repair Workshops.

Are generally allotted to Bases as required.

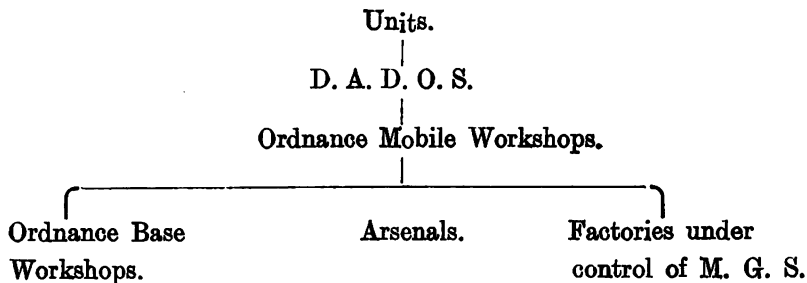
(vi) *For Demand and Supply of clothing and Ordnance Stores* (other than ammunition) the chain is as follows:—



(vii) Ammunition is sent up from Arsenals to Ammunition Depots as required under the orders of G. H. Q. on demands from Armies.

(viii) Explosives are supplied and stored by arsenals and are sent up to Ammunition Depots or Advanced Engineer Parks as required.

(ix) *Repair of equipment*, weapons of all kinds, and vehicles other than M. T., is as follows :—

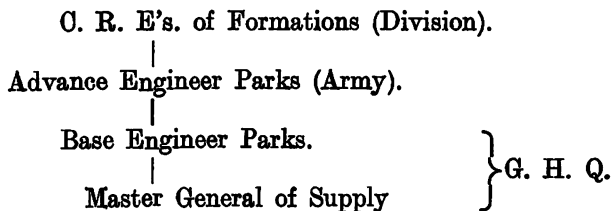


(x) Arsenals, clothing depots, etc., controlled by the I. A. O. C., are replenished under orders of G. H. Q. by the Master General of Supply, through the Directorates of Artillery and Ordnance Factories and Manufacture.

4. M. E. S. duties.

(i) The Engineer-in-Chief, in his capacity as Director of Works, is the Agent of the Q. M. G. He supplies Engineer stores of all kinds.

(ii) The chain of demand and supply is as follows :—



(iii) The duties of the various Engineer Units on the L. of C. are beyond the scope of these notes.

(iv) Normally no transport is allotted to Field Formations for the carriage of Engineer stores. Engineer stores are sent up as required on transport allotted from the L. of C. Transport Pool.

5. I. A. V. C. duties.

(i) Units employed on the L. of C. are as follows :—

(a) *Veterinary Evacuating Station*.—To deal with animals passing down the L. of C. between Mobile Veterinary Sections and Reception Veterinary Hospitals.

(b) *Veterinary Hospitals*.—To accommodate 250 horses, mules or bullocks.

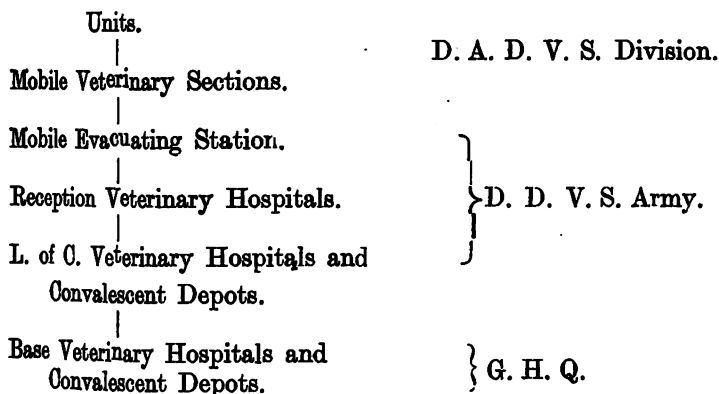
(c) *Veterinary Hospitals (Camels).*—To accommodate 500 camels.

(d) *Veterinary Convalescent Depots.*—To accommodate 500 horses, mules or bullocks.

(e) *Veterinary Convalescent Depots (Camels).*—To accommodate 500 camels.

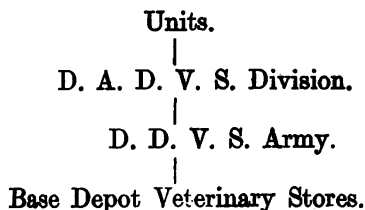
(f) *Base Depot of Veterinary Stores.*—For supply of medicines and Veterinary Stores.

(ii) The chain of Veterinary Evacuation is as follows :—



(iii) Recovered animals are transferred to the Army Remount Department under orders of G. H. Q.

(iv) Veterinary Stores and Medical Supplies are replenished as follows :—



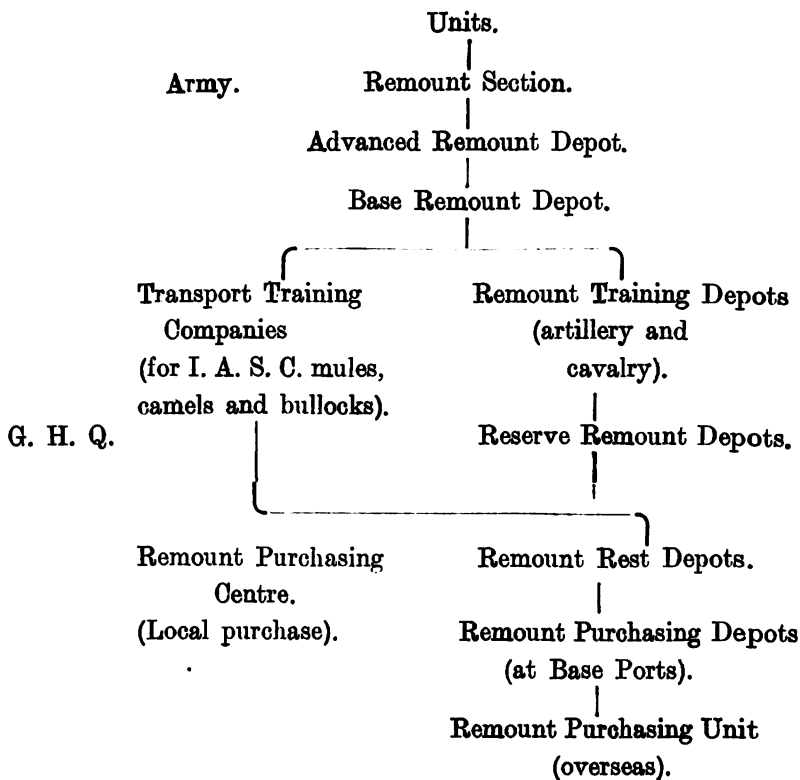
(v) The Base Depot of Veterinary Stores is replenished by G. H. Q. (Director of Veterinary Services) demanding on the Director-General, Indian Medical Service. The latter supplies through Medical Store Depots.

6. Army Remount Department duties.

(i) A. R. D. units and organizations for the L. of C. are as follows :—

(a) *Field Remount Section* : for employment at Railhead and beyond.

- (b) *Remount Squadron* : to hold 750 animals (horses, mules, bullocks and camels) in lines or 1,000 in paddocks and form the Advanced Remount Depot.
- (c) *Base Remount Depots* : consisting of a H. Q. and 1 or more Remount Squadrons.
- (d) *Remount Training Depots* : for training artillery horses and Pack artillery mules.
- (e) *Remount Training Depots* : for training cavalry horses.
- (f) *Reserve Remount Depots* : to hold 1,500 horses and 1,600 mules.
- (g) *Remount Rest Depots* : to hold 1,000 horses on arrival from overseas.
- (h) *Remount Purchasing Depot* : for imported horses : located at Base Ports.
- (i) *Remount Purchasing Centre* : for local purchase of animals.
- (j) *Remount Purchasing Unit* : for purchasing duties overseas.
- (ii). Supply of animals is as follows :—



7. *Labour.*

(i) Labour is provided by the A. G. and is controlled and administered by the Q. M. G.

(ii) A Labour Company consists of 300 men.

(iii) Labour Companies are allotted to Railheads, Posts on the L. of C. Advanced Bases and Bases as required by G. H. Q.

(iv) Control of Labour is as follows :—

D. A. D., Labour at G. H. Q.

1 Labour Commandant

1 Labour Officer

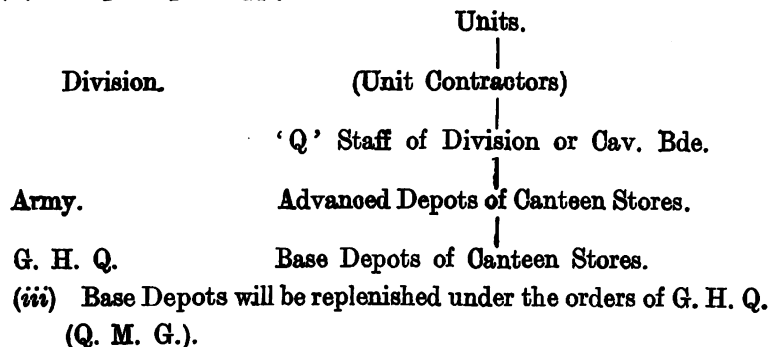
} Army.

(v) Normally Labour Companies at Advanced Bases, etc., are pooled and are allotted as required on demands by Services. Labour Companies are not definitely allotted to Services and Departments.

8. *Canteens.*

(i) Following the liquidation of the A. C. B. (I) the Canteen system is not yet finally decided.

(ii) In principle supply of canteen stores will be as follows :—



(iv) Beyond railheads canteen supplies will be sent up on the L. of C. Transport Pool under arrangements made by 'Q' staff of armies.

9. *Postal.*

(i). Postal arrangements, generally, are made by the Director General of Posts and Telegraphs.

(ii) For military purposes, postal arrangements on the L. of C. are controlled by—

(a) Deputy Director of Postal Services at G. H. Q.

(b) 1 Assistant Director of Postal Services,

2 Deputy Assistant Directors of Postal Services,
with armies,

- (iii) Base Post Offices are allotted to Advanced Bases (Army) capable of dealing with (each) 1 Cavalry Brigade and 2 Divisions.
- (iv) Base Postal Depots are located at Main Bases.
- (v) Beyond railhead, mails are sent up to Field Post Offices on transport allotted from the L. of C. Transport Pool.

Movements.

Moves by Road.

1. The question of transport by road has been dealt with in notes on the transport allotted to field units and formations and the L. of C. Transport Pool.

Tactical moves of troops by lorry are carried out under orders of Armies with transport from the L. of C. Pool or from hired sources.

2. *Moves by Rail.*

(a) Generally the Q. M. G. is responsible for all transportation by rail up to broad gauge railheads.

(b) Railway administrations continue all technical control of Railways in War, and carry out Military demands for transportation.

(c) The following are the main Rail Transportation Units and Formations :—

(i) *Milrail* : consisting of military officers and officials appointed by the Railway Board. This organization co-ordinates military demands and transmits these demands to railways concerned. It is located at G. H. Q. and controls all railway movements through the Movement Control (R. T.) Staff. If necessary advanced echelons of this formation (known as "Advanced Milrail") can be located elsewhere to control movement over certain systems under the general orders of *Milrail*.

(ii) Whereas all orders for railway transportation are issued by "Milrail" or "Advanced Milrail", detailed work in connection with rail moves is carried out by the Movement Control (Railway Traffic) Staff in close co-operation with local railway authorities. The movement Control (R. T.) staff is directly under the Q. M. G. and consists of—

H. Q. Movement Control (R. T.) Areas :

Movement Control (R. T.) Sections :

Movement Control (R. T.)^{} Offices.*

"Offices" are located at large stations and junctions.

"Sections" control two or more "offices": "Areas" control two or more "Sections". Full details of the working of the Movement Control (R. T.) staff are found in the Railway Manual (War) India, and the Manual of Movement (War) 1923.

(iii) The Military Forwarding Organization also works directly under the Q. M. G. M. F. O. sections are located at Railheads and Base Ports. This Organization deals with small consignments addressed to units, formations, individuals or services which cannot be accepted for transmission by the Field Postal Service. It deals with stores of the most varied description such as kits of killed and wounded Officers, men's effects—private parcels, small packets of inter-departmental stores, public comforts, etc. (See Manual of Movement (War) and Railway Manual (War) India).

(iv) Broad gauge railway Operating and Construction Battalions are classified as "Transportation Units." They are, however, provided by "A" and controlled as regards construction by "G".

3. *Moves by Sea.*

(a) Shipping is taken up for war under the orders of the Q. M. G. by the Principal Naval Transport Officer, who, normally, is the Director of the Royal Indian Marine.

(b) Embarkation duties are carried out by—

Embarkation H. Q. Class I: at large Base Ports.

Embarkation H. Q. Class II: at smaller Base Ports.

(c) Embarkation H. Q. Class I consists of—

Headquarters and Staff.

Troop Section.

Stores Section.

M. F. O. Section.

S. and T. Section.

Ordnance Section.

Veterinary Section.

Medical Section.

Details of the duties of these sections are beyond the scope of these notes.

4. *Miscellaneous L. of C. Units controlled by "Q".*(a) *Mess Units.*—These comprise—

Mess Inspection Units.

Mess Units for British Officers.

Mess Units for British Other Ranks.

They are located as required at posts on the L. of C.

(b) *Overseas Rest Camps.*—

Overseas Rest Camps are located at Base Ports and accommodate oversea reinforcements passing through.

Final Notes.

1. A diagram is attached shewing parallel units of "Q" Services in War. It has no connection with any particular operation either past or future, and is merely a rough guide to show general principles. The system is necessarily elastic, and interchange of units is often desirable in practice.

2. Endeavour has been made in these notes to exclude all extraneous details, and particular details in connection with "Q" staff duties. Further details may be obtained from—

F. S. R. Vol. I, 1923.

F. S. P. B. 1926.

Railway Manual (War) India.

Manual of Movement (War) 1923.

War Establishments, India, 1927.

I. A. S. C. Training.

3. It should be remembered that details of "Q" organization for war are always changing. Moreover with the advent of Mechanization certain changes in composition of units and in the chain of replacement, repair and control are bound to occur. But the Broad Principles of Supply in War are unlikely to undergo any considerable modification. The object of these notes is to give a general idea of the application of these principles to Indian conditions.

DIAGRAM SHOWING PARALLEL UNITS OF "Q" SERVICES IN WAR.

323

Division and Cav. Bde. in the Field beyond Railhead.	I. A. S. C.		I. A. O. C. & M. E. S.	A. R. D. & I. A. V. C.	Canteen, Postal and Labour.	Transportation.
	M. T. & A. T.	Supplies.				
	1st Line Transport of Units.					
	Baggage and Supply Secs. of Divnl. Train.	Supply Issue Secns. Butchery Secns. Bakery Secns.	D. A. D. O. S.	Vety. Asst. Surgeons and Farriers with Units. Mobile Vety. Secn. Executive Vety. Officers.	Unit Canteen Contractors. Field Post Offices.	
Posts on L. of C. beyond Railhead and Railheads.	Light M. T. Coys. Unit Workshops (M. T.) Mobile Repair Units (M. T.) Mule Transport Coys. Camel " " Hired Transport.	Railhead Supply Dets. Local Purchase Secns. Supply Secns. Butchery Secns. Bakery Secns.	Ammunition Secns. Adv. Ord. Depots.	Vety. Evacuating Station. Remount Secn.	Labour Coys.	Mess Units. Movement Control (R. T.) Offices. M. F. O. Secns.
Advanced Bases.	Advanced Vehicle Reception Depot. Heavy Repair Shops (M. T.) Transport Training Coys.	Cattle Depot Secns. Supply Depot Secns. Supply Depot H. Q. Supply Tally Secns. Supply W. Shop Secns. Local Purchase Secns.	Ammunition Secns. Ordnance Mobile Workshops. Ordnance Advanced Depots. Ordnance Engineer Parks.	Vety. Reception Hospitals. Remount Squadron.	Base Post Offices. Adv. Depots of Canteen Stores. Labour Coys.	Movement Control (R. T.) Secns. H. Q. Movement Control (R. T.) Areas. M. F. O. Secns. Advanced Milrail. Mess Units.
Main Bases.	Base Vehicle. Reception Depots. Heavy Repair Shops (M. T.) M. T. Collecting Centres. H. Q. Transport Training Group. M. T. Stores Depot.	Cattle Depot H. Q. Cattle Depot Secns. Supply Depot Coys. Supply Tally Secns. Supply Workshop Secns.	Anti Gas Mask Repair Workshop. Ordnance Base Workshops. Ordnance Base Depots. Base Engineer Parks.	Vety. Hospitals. Vety. Convalescent Depots. Base Depot of Vety. Stores. Base Remount Depots. Remount Training Depots. Reserve Remount Depots. Remount Purchasing Depots Remount Purchasing Centres	Base Depot of Canteen Stores. Base Postal Depot. Labour Coys.	Milrail M. F. O. Secns. Embarkation H. Q. Overseas Rest Camps.
Provision.	M. G. S. (D. G. Stores for Overseas Supply).	M. G. S.	Arsenals, Clothing Depots, M. G. S. (Factories and the Trade).	Remount Purchasing Units (Overseas.)	Overseas Supply for Canteen Stores.	P. N. T. O.

ORGANIZATION OF THE INDIAN ARMY.

(A Lecture delivered at the Army Headquarters Staff College
Course 1927.)

By

COLONEL L. F. ARTHUR, D.S.O., O.B.E.

1. *Introductory.*—This afternoon I am going to try and tell you something about the organization of the Indian Army.

You do not require to go into this subject in very great detail for the purposes of the Staff College examination, as all the papers are set on British establishments, but you should have some knowledge of Indian Army Organization in order to appreciate the military position of India in relation to the forces of other parts of the Empire.

2. *The Army in India and its Evolution.*—In the first place I would recommend you to get hold of a copy of the book "*The Army in India and its Evolution*" which deals with all the important organization measures which have been introduced since the early days of the 17th century (when the forces of the E. I. Coy. were isolated and unorganised entities) up to 1923. It is an official publication and any bookseller will be able to get it for you.

3. *Scope of Lecture.*—In this lecture I propose to confine myself chiefly to the organization on the fighting units of the Indian Army.

Fighting Units.—The fighting units comprise—

- 21 regiments of cavalry.
- 19 Indian mountain batteries.
- 4 corps of Sappers and Miners.
- 85 active battalions of Indian Infantry (5 employed overseas).
- 20 Gurkha battalions.
- 19 Indian infantry training battalions.
- 9 battalions of pioneers.
- 3 Pioneer training battalions.

4. *Object of a good Organization.*—In F. S. R., Vol. I, Chapter I, you will find enunciated the object to be aimed at in a good organization.

This object is the defeat of the enemy's armed forces with the minimum expenditure of men, money and material and in the shortest possible time.

This can only be attained by so organizing the army in peace that it can carry out its various functions in war to the best possible advantage.

5. *Role of the Indian Army.*—The conditions under which the army in India may have to operate are very different to those of any other part of the Empire, and these conditions have a very great influence on organization. In addition to the role the Indian army has to play as a component part of the Imperial Army, it has very heavy local and “domestic” responsibilities in the defence of India against external aggression and in the maintenance of internal law and order. We all know that the danger spot is the N.-W. Frontier. We also know that the best defence is offence and therefore that the army in India has to be prepared to fight as a mobile force in a country practically devoid of any proper communications, with a climate, which has extremes of heat and cold, against an enemy who may be organized on European lines or be merely guerilla bands which have to be hunted out of their mountains by small columns. So, as the additions for India to F. S. R., Vol. I, puts it “While general principles of organization are common to all the land forces of the British Empire, there are local modifications in the methods by which these principles are applied to India.

6. *Difficult to keep Indian Organization simple.*—These are a few of the considerations which make it difficult to keep the Indian organization *simple*, and in organization simplicity is a very important point. But in the Indian army there are a whole lot of things which tend to complicate the machine which are not to be found in the British army.

For instance, the Indian army has three grades of officers—British with King’s Commissions and Indians, some with King’s and others with Viceroy’s Commissions. The rank and file is composed of men who differ from each other in nationality, characteristics, habits and temperament, and also in religion. This heterogeneous army has to live and train in peace and fight in war in the same formations with another alien army which differs from it in almost every conceivable characteristic. The difficulty of keeping the organization simple is therefore a very real one.

7. *Difference in Establishments of Indian Infantry and Pioneer Battalions.*—Take again the question of establishments. You

would have thought that it would be possible to have the same Peace establishments for all Indian infantry and pioneer battalions. Yet before the War there were no less than five which varied from 600 to 912 I. O. Rs.

Even now it has not been possible for various reasons to make the Peace establishment of all infantry and pioneer units identical, but they have been simplified to the extent that the Establishments can be easily identified. Thus there is one for all active Indian infantry battalions.

One for all active pioneer battalions (except the 4th Hazara Pioneers) and one for all active Gurkha rifle battalions.

The establishments of training battalions depend on the number of active battalions in the regiment and must therefore vary but they are fixed on a definite proportion, and contain no anomalies.

8. *Organization must be comprehensive.*—It is obvious that an organization which includes as many types of units as possible within its scope makes for efficiency. Exception leads to error and confusion. So a good organisation should be *comprehensive*. In pre-war days the Indian army was full of exceptions. There were localised corps, semi-political corps, cavalry regiments organised on two systems—silladar and non-silladar each fundamentally different, and one cavalry regiment (the Guides) had only 3 squadrons, while all others had four. As you may imagine these exceptions caused immense trouble and confusion during the war, and in the interests of efficiency as many as possible have been removed, though their removal meant stepping on a good many people's toes.

For instance cavalry are now all organised on identically similar lines, *viz.*, regular, and localised corps have gone.

9. *Organization must be elastic to admit of smooth expansion.*—It is naturally impossible on financial grounds to keep an army on a war footing in peace, and in any scheme of military organization it is necessary to keep one eye all the time on the possible necessity of expansion.

The more elastic the organization of the Army in peace the simpler expansion in war.

10. *Methods of Expansion.*—There are two ways by which expansion can be effected—

(i) Growth by expansion from within.

(ii) Increase by multiplication.

The first means taking a unit and splitting it up into parts and on those foundations building up new units with reservists, drafts from other units, recruits, etc. This is the quickest method, but it has one serious objection, and that is that during the process of reconstruction both the original and the new unit is useless for any purpose. It is however the quickest method.

The second, *i.e.*, increase by multiplication was the system that was generally employed to expand the Indian army in the war. This was largely due to the fact that no well considered scheme for expansion had been worked out in peace. With few exceptions every unit was a separate entity with no real affiliation with any other. And so the system employed was to 'milk' existing units of a small nucleus of officers, specialists and a few similar essentials and on that nucleus to build up an entirely new unit. Every new unit so formed when it went overseas left behind its own extemporised depot in India and this resulted in an enormous number of independent units scattered about India. These depots had no fixed homes and were frequently moved about from one station to another according to the requirements of the accommodation situation, and their functions consequently were seriously interfered with.

11. *The Training Battalion System.*—This evil has been abolished by the introduction of the training battalion system and the grouping of battalions of infantry and pioneers definitely into regiments.

We call it the training battalion system, but this is simply the term used to denote the system of *depots* definitely organised to supply drafts of trained men in peace and reinforcements in war to the units which are dependent on them. For artillery and signal units there are training "centres" organised on very similar lines and fulfilling a similar role.

12. *Organization of the Training Battalion.*—The organization of the training battalion is based on the number of active battalions in the regiment. Each active battalion has its affiliated training company in the T. B. of the same class composition as the active battalion. An essential feature of the system is that the T. B. is permanently located at its station, which is the regimental centre and has been selected whenever possible, for its central position as regards the class composition of the regiment.

For instance the 10/6th Rajputana Rifles are at Nasirabad, the 10/17th Dogras at Jullundur, and the 10/18th Garhwal Rifles at Lansdowne, and the 10/5th Mahratta L. I. at Belgaum.

The active battalions of the regiment provide the trained personnel required for duty and as instructors.

The tour of duty of those men with the T. B. with a few exceptions is limited to a few years and so there is a continual "turn-over" going on which prevents men getting stale. (For length of tours of duty with the T. B. see T. B. Manual, para. 13.)

The success of the T. B. system is dependent on close co-operation between the T. B. and active battalions and the fostering of a regimental spirit.

The T. B. is both the nursery of the regiments and the reserve centre, and in war it becomes the record office of all mobilized battalions of the regiment.

13. *Expansion*.—It has in it all the machinery necessary for smooth expansion on mobilization according to requirements, certain additional personnel being sent to it by each mobilized active battalion (see F. S. Manual, Indian Infantry, page 19 and W. E. 1927, Vol. IV). The Scheme of Expansion is given in Vol. IV of W. E. India but this is again being revised).

Garrison Companies.—There is one point about this war organization to which I would draw your attention—that is the "garrison company". These are formed on mobilization from pensioned Indian officers and I. O. Rs., whose names are registered in peace, and they have two roles—

- (1) To relieve the personnel of the T. Bs. from all ordinary garrison and routine duties.
- (2) For allotment to commands for duties at stations from which F. A. units have been withdrawn.

The latter will be raised at the T. Bs. in the same way as those it requires for its own use.

15. "*Man Day*" Scheme.—The T. B. system however has not hitherto been entirely successful in maintaining active battalions up to strength. This has not been so much the fault of the system as of the fact that when it was introduced nearly all battalions were

very much under strength and T. Bs. have never "caught up" that deficit. Another cause is the restriction imposed by financial procedure. It takes at least 8 months to turn out a trained infantry recruit—it only takes a few minutes to discharge a man or transfer him to the reserve—but the Commandant of the T. Bs. could not enrol a recruit in anticipation of a deficiency which he could foresee, because that might have brought the strength of an active battalion over the authorised establishment. So when a man was discharged his vacancy often remained unfilled until another recruit could be caught, and the active battalion remained short until he was trained. Also owing to certain seasons of the year in India being very much better for recruiting than others it would often take months before recruits could be obtained to make up deficiencies.

(A. I. I. A. 36 of 1927).—In a recent Army Instruction a new system known as the "man-day" scheme was introduced. This lays down that a regiment shall reckon its "Establishment" in "man-days" instead of in men only, *i.e.*, the authorised establishment is the Peace establishment of Indian ranks of all the active battalions of a regiment taken together plus the establishment of the T. B.—all multiplied by 365 or 366. For instance the "man-day" establishment of a regiment with 5 active battalions is $763 \times 5 \times 365$ plus 813×365 .

The Commandant, T. B., has to maintain a running record for the whole financial year (*i.e.*, from 1st March to end of February because the pay of the army for March is paid in April) and to regulate the intake of recruits accordingly. Thus any deficiencies anticipated or actual at one time of the year can be counter-balanced by over-recruitment at other times.

The T. B. Commander is the co-ordinating authority and it is up to him to see that the "man-days" allowed for the regiment as a whole are not exceeded.

16. *T. B. system not applied to Gurkhas and 4th Hazara Pioneers.*—The T. B. system has been applied to all battalions of infantry and pioneers except Gurkhas and the 4th Hazara Pioneers. In their case each battalion has a training company through which all recruits pass. In the event of mobilization two or more of these training companies will be amalgamated to form *Gurkha Group Centres*. The weak feature about this system is that group centre headquarters

will have to be improvised, on mobilization. The training company of the independent pioneer battalion expands into a depot. You will find the system of expansion in both these cases in Vol. IV, War Establishments, 1927.

17. *Cavalry Organization.*—In the case of cavalry the system is different. In peace each regiment is responsible for training its own recruits. In war the procedure is as follows :—

The 21 cavalry regiments are organised in peace in 7 groups—and for each group there is a “centre,” at which one regiment of the groups is always stationed in peace. On mobilization the regiment which happens to be at the centre becomes the depot and record office for the other two, and at the same time has internal security duties to perform. It therefore mobilises 2 squadrons for internal security and forms the third squadron reinforced from the other two regiments of the group, into training squadrons. As all the regiments of a group have the same class composition there is no difficulty on that score. The weak point of the system is that we are definitely using a third of our much reduced cavalry for internal security and depot work.

Organisation of Indian Cavalry Regiment.—As regards the actual organization of an Indian cavalry regiment in peace we still adhere to the organization consisting of—

- (1) Regimental headquarters,
- (2) Headquarter wing of 4 groups, and
- (3) 3 squadrons.

The machine gun group is No. 2 group of the headquarter wing and has 4 Vickers guns, while there is a * Hotchkiss gun troop of 3 H guns in each squadron.

18. *Comparison of British Cavalry Regiment with Indian Cavalry Regiment.*—It will interest you perhaps to compare this organization with the latest organization for cavalry introduced at Home, in view of what I said earlier on the subject of India's peculiar problems. Note the M. G. squadron with its 16 Vickers guns and the elimination of Hotchkiss guns. How would the Home organization suit a squadron acting independently on the frontier? Consider too the problem of ammunition supply for a cavalry brigade with its 24 machine

*It has since been decided that Hotchkiss guns shall be withdrawn from cavalry though one or two may be left for anti-aircraft work.

guns operating in a country where everything may have to come up on "donkeys."

19. *Establishments.*—*I. I. Battalion.*—Now a few words about our present Peace establishments for Indian infantry and the knotty problem of reserves.

In 1914 the establishment of all Indian infantry battalions earmarked for the field army was 896. I. O. Rs. This was higher than the War establishment, and the result was that even after deducting untrained recruits, sick and so on, most battalions could mobilize without any reservists. By 1921 the Peace establishment had dropped to 806, but this was compensated for by the introduction of the T. B. system, and 806 was still about 60 above the numbers required to mobilise, and all was well. As a result of the Inchcape Committee 1922/23 however, Indian infantry battalions were reduced by 64 sepoy each, i.e., to 742 I. O. Rs. and this meant that the Peace establishment was now lower than the War establishment.

The I. A. Reserve.—Up to this time the Indian army reserve had been a voluntary one. It now became necessary to form a reserve which would be immediately available to enable units to mobilise and be maintained until recruits could be trained. New terms of service were accordingly introduced for infantry in 1923, and for cavalry in 1925 the important feature of which was that for the first time *service in the reserve was made compulsory*. The important terms are *Infantry and Pioneers*—5 years colour and 10 years reserve.

Cavalry.—7 years colour and 8 years reserve.

Artillery. }
(*gunners*). } —6 years colour and 9 years reserve.

S. & M.—7 years colour and 8 years reserve.

As in other things an exception was made in the case of Gurkhas who are still enlisted for 4 years only with the option of extension, and no reserve service, unless they take it on voluntarily. There are political reasons for an exception being made in the case of Gurkhas, which I have not time to go into.

20. *Formation of the New Reserve.*—As units could not now mobilise without a certain number of reservists it was essential that the numbers required to complete to W. E. and as first reinforcements, should be fit to rejoin the ranks immediately. Those required for reinforcements later would have time to do some training before being sent to an active battalion.

So there are two classes in the reserve, class "A" and class "B". Class "A" trains every year, class "B" every two years-in both cases for one month. A man cannot remain more than 3 years in class "A". As soon as he completes 8 years combined colour and reserve service he must move on to "B". He spends the remainder of his reserve service, *i.e.*, until he completes a total of 15 years service altogether, in class "B".

I would particularly ask you to note that there is no age limit for class "A" or "B" of the reserve. There was for the voluntary reserve, class I and II. The essential qualifications now are fitness and efficiency, and a strict medical examination takes place every time a reservist comes up for training.

21. *Criticism of Present Terms of Enrolment.*—A good deal of criticism has been directed against the present terms of service in the Indian army, *e.g.*, it is unpopular, the Indian is a long service soldier; he goes to the reserve at his prime; when in the reserve he runs to seed very quickly, etc. The new terms are naturally unpopular compared with the one-sided bargain there used to be.

Under the old terms a sepoy and sowar enlisted for 4 years only but he had the option of remaining on in the service after that up to 21 years and could take his discharge voluntarily at his own request at any time by giving 2 months notice provided his unit was not 10 per cent. under strength. He had no liability for Reserve service, but could go to the reserve if he liked. He thus retained considerable freedom of action once he had completed his first 4 years service, and this was naturally popular. The new terms of service have deprived him of this freedom of action. He must now take on definitely for 15 years and any extension of service must be for a definite period. If he leaves the colours before he has completed 15 years service he *must* go to the reserve if he is fit and efficient.

Naturally a revolutionary measure like this was not introduced without the most mature consideration of all the factors. It was a question of the interest of the army as a whole against that of the individual. Military expenditure had to be reduced. At the same time efficiency had to be maintained, and a properly organised reserve was absolutely essential to make up for the reduced Peace establishments.

22. *Deficiencies in Indian infantry battalion in peace compared with requirements in War.*—On page 18/19 of the F. S. Manual Indian Infantry you will see a table and notes showing how an Indian infantry battalion passes from peace to war establishment and that the estimated deficiency is 70, i.e.—

46 sick and unfit.

19 required to join the T. B.

and 5 the difference between P. E. and W. E.

70

Class "A" of the reserve for an infantry battalion is only 77 so most of that class are used up for the initial mobilization and there are not many left for 10 per cent. 1st reinforcement. Class "B" is 227 or a total reserve per battalion of 304. For Gurkhas the reserve is 100 per battalion only and it is difficult to maintain even this inadequate number. The Gurkha reserve is still a voluntary one, as for various reasons it has not been found possible to apply the new terms of service to Gurkhas.

23. *Recruiting Organisation.*—Now a few words about recruiting. The supreme responsibility for recruiting is vested in the Adjutant-General in India. Under him is a permanent recruiting staff, consisting of 9 recruiting officers and 20 (since slightly reduced) assistant recruiting officers. As most of the martial races live in Northern India, naturally most of the recruiting officers are in the Punjab. Each R. O. has a definite area to exploit, and he is responsible for recruiting all classes found in his area.

The policy aims at keeping in touch in peace time with all classes suitable for the army so that when expansion becomes necessary we shall not have to break new ground nor establish new connections which always take time.

24. On mobilization the recruiting organisation has to expand very rapidly and to work in close co-operation with the Civil officials of local Governments. The steps to be taken have been worked out in great detail and special recruiting regulations for War have been prepared and will shortly be issued.

25. *Class composition based on class squadrons and companies.*—Closely connected with recruiting is the question of class composition. As you probably all know the units of the Indian

army are with few exceptions composed of mixed classes and races on a squadron or company basis. In a few cases, for instance *Trans-Frontier Pathans*, there are class platoons,—but from the point of view of maintenance in peace and expansion in War the class company system has many advantages.

26. *Exceptions Class Regiments*.—The exceptions to the class company composition are—

3 battalions of the 11th Sikhs.

17th Dogra Regiment (3 battalions and T. B.)

18th Garhwal Rifles (3 battalions and T. B.)

The Kumaon Rifles (one of the battalions of the 19th Hyderabad Regiment).

3rd Sikh Pioneers.

4th Sikh Pioneers.

All of which are composed of one class only. There are no exceptions to the squadron class composition in the Indian cavalry.

27. *Artillery, Organisation of*.—I have not said much so far about the organisation of artillery units in India as this generally conforms to the organisation at Home which will be or has been dealt with by other lecturers. The most important modification in the organisation of the horse and field artillery in India is the incorporation in the battery of a very much larger number of Indian drivers than was the case before the war. In 1914 there were only 10 Indian drivers in a field battery. Now a field battery on the higher establishment has—

1 Indian officer, and

54 I. O. Rs.

This increase in Indians was introduced partly for reasons of economy (the *Inchcape* cuts again) and also in order to have an immediate reserve of B. O. Rs. available in India so that batteries could mobilise and be maintained until reinforcements from Home could arrive. Horse, field, pack and medium batteries were all affected. Thus there are more B. O. Rs. in the P. E. of a field battery than are required in the W. E.

The men though only drivers all belong to the martial classes and are chiefly Sikhs and P. Ms.

There are, of course, 19 purely Indian mountain batteries, the composition of which is nearly entirely Sikhs and P. Ms.

Artillery Training Centres.—To maintain the Indian personnel of R. A. and mountain artillery units there are two artillery training centres, which I have already mentioned. The R. A. T. C. at Muttra and the P. A. T. C. at Lucknow. All recruits whether enlisted at battery headquarters or by a recruiting officer go to these centres for their preliminary training.

28. *Introduction of Indian Ranks British Infantry.*—There is one other innovation since the war to which I have not yet referred, and that is the introduction in 1921 of a certain number of Indian combatants into British infantry units. They consist of 1 Indian officer and 39 I. O. Rs. and are employed as drivers in No. 2 group—the machine gun group of the headquarter wing.

These men all belong to the same classes as are taken for the Indian army. The “depot” or “training centre” in their case is the British infantry training company which is attached to the 10/17th Dogra Regiment at Jullundur.

When a B. I. battalion leaves India the Indian personnel are transferred *en bloc* to one of the incoming battalions.

29. *Indian State Forces.*—The Indian State Forces do not form an integral part of the Indian army, but as in the past it has been the custom for ruling chiefs to place a proportion of their forces at the disposal of the Government of India, in case of emergency it is quite possible that units of Indian State Forces may be incorporated in war formations.

A considerable number of Imperial service troops as they were then called, were used in the war, and under the leadership of British officers, some of them did very good work. Since the war considerable reorganization has been carried out, and they have been classified into three categories.

Class A.—Organized and armed on the same lines as Indian troops.

Class B.—A little inferior to class A in training and discipline, and not organized on modern lines.

Class C.—Mainly militia formations of very little value.

To assist the chiefs in the organization and training of their forces there is a Military Adviser-in-Chief at A. H. Q. and all the

important States have "Military Advisers" and "Assistant Military Advisers" who are officers of the Indian army or R. A. The Government of India grant facilities for training and providing military equipment.

30. *Indianization*.—You will find a chapter in "The Indian Army and its Evolution" devoted to the subject of Indianization.

When Indians were first made eligible for King's Commissions they could get them in two ways—

- (1) By passing through Sandhurst in the ordinary way.
- (2) By special selection from among Indian officers with Viceroy's Commissions.

The latter are now limited to Honorary King's Commissions, as it was found that the Indian officer who had risen through the ranks was generally too old and not sufficiently well educated to take on the duties of a B. O.

The Indian officer is now only given an Honorary King's Commission as a reward for particularly good service.

There are now 10 vacancies for Indian cadets at Sandhurst every year. Indian candidates compete amongst themselves for these vacancies, and have to be approved by a selection board, the C.-in-C. and the Viceroy. The age limit for Indians is 20. For British cadets 19.

The Indian Military College at Dehra Dun which is run on public school lines provides a certain number of candidates. The College takes 70 boys and the Syllabus is designed to give them the preliminary education necessary for the Sandhurst examination. Some Indian officers are admitted on special terms.

*In 1923 it was decided to Indianise eight units of the Indian army, viz, 2 cavalry, 5 infantry and 1 pioneer. This was intended as an experiment to see if units officered entirely by Indians would be as efficient as others with B. O's.

* The Sandhurst Committee recommended the abolition of this "8 unit system" but it has recently been decided that the experiment should be continued.

NOTES ON JUNGLE WARFARE.

By

CAPTAIN J. W. YOUNG, 2/10TH GURKHA RIFLES.

This publication is intended primarily for the use of British officers who are attached to the Burma military police. It will be understood that, while the principles of war as detailed in F. S. R. remain unchanged, in undertaking campaigns in an undeveloped and uncivilized country as is met with on the frontiers of Burma the armament, tactics and characteristics of the tribes and the nature of the theatre of operations will necessitate considerable modifications in the methods of application of those principles. The modifications referred to hereafter are such as have been found necessary in the operations against these tribes, and the instructions embodied herein, are intended to supplement, and in no way to supersede those contained in F. S. R. and the Training Manuals.

PART I.—*The Country and the People.*

(1) *The Country.*—Burma, the largest and Easternmost Province of the Indian Empire, was finally annexed in 1887. In the initial years only the areas which had been ruled over by the Kings of Burma were administered but as time went on circumstances rendered it imperative for us to undertake the administration of many frontier areas which had previously been under loose tribal law. Other areas still remain unadministered; but in course of time the tendency has been to take over these areas. In the unadministered areas the tribes manage their own affairs absolutely. Whilst the horizon of these primitive peoples was bounded by the distance of the nearest village, and their fighting limited to blood feuds, our policy was to leave them to their own devices. It was only when (as in the case of the Chins and Kachins) they carried out thorough and systematic raids on the villages of the plains, that we were constrained to interfere. There are still important unadministered areas—the Hukong Valley, the Triangle (the land lying between the two streams which form the headwaters of the Irrawaddy River) in the Kachin Hills in the North and North-east, and a large part of the country between Burma on the one side and Assam and Arakan on the other, in the Chin Hills.

The country is extremely mountainous and is densely wooded with tropical vegetation. The roads are at the best mule tracks and much work is necessary to keep them from becoming overgrown.

The climate is very variable depending in degree on the altitude and season. There is generally a very excessive rainfall, and, in the rains, fevers and sores are more prevalent amongst troops than in the dry season, and transport mules are more liable to such fatal diseases as Surra. It may be taken that it is only in a case of grave emergency that operations would be undertaken in the rainy season.

The cold season—the period between November and March—is the season in which operations are usually undertaken. At that time the climate is generally pleasant and the rainfall negligible.

(2) *The People*.—Their fighting characteristics.

It is one of the primary duties of an officer who has been posted to a Frontier battalion, to make himself thoroughly conversant with the characteristics of the various tribes who inhabit the area in which his battalion is stationed, and against whom he may be detailed to proceed with a column.

The few notes given below are far from exhaustive and it is necessary for an officer to read the official Gazetteers in order to amplify his knowledge. Much information can also be extracted from the history of his battalion.

Ambuscades.—All frontier tribes are very partial to ambuscades. With the Ohins especially, this form of warfare is preferred to the making of an attack in force. Generations of guerilla warfare have made them adept and most of our losses have been due to sniping and ambushes. Generally the tribesmen possess unlimited patience, and are prepared to wait indefinite periods for a suitable opportunity of inflicting loss on our columns.

They are adepts at crawling into our posts at night; but are very sensitive with regard to their line of retreat.

Sniping.—The Ohin sniper almost invariably takes up his position *below the path* on which our column is proceeding. After firing his shot he is then able to dive down the hill in such a way as to render it practically impossible to shoot him.

All tribesmen are more dangerous to our columns when the latter are *en route* than when they are in camp.

Officers.—In the Ohin Hills Operations our losses due to the sniping of officers when on the march were unduly heavy. It is undoubted that the enemy is extremely elated whenever he is successful in shooting

an officer and the effect on the morale of our own troops is not good. An officer operating against these tribes must realise that he is irreplaceable and unnecessary risks should be avoided.

When marching through hostile territory officers should on no account march in company. Officers must wear the same type of head-dress as their men so as to lessen the chances of recognition.

3. *Dealing with Ambuscades.*—Experience has shown that the most successful method of dealing with enemy ambuscades is to make an immediate rush in the direction from which the shots are fired. The tribesmen have a distinct dislike to this form of action and although they may have retained a few guns in reserve, their minds are divided between anxiety as to the security of their line of retreat and the desire to kill the advancing enemy.

When tribesmen take action against our camps, dawn is the favourite time.

The most effective method of dealing with tribesmen who harass our camps is by means of ambushes. This proceeding is far preferable to an increase of sentries.

Plan.—In subjugating these tribes the most satisfactory results have followed the adoption of the plan of ambushing the enemy in preference to allowing him to ambush our columns. In dealing with an elusive enemy the destruction of his crops has often been more productive of results (and less difficult of attainment) than destroying one who will not stand to fight. For example in the Chin Hills Operations the ultimate collapse of the enemy was due to the adoption of this plan. First all combined opposition was defeated. Following this our columns were reorganized into smaller parties which were stationed at points of vantage in the hills. The enemy villages were then destroyed and the tribesmen were compelled by circumstances to take refuge in scattered settlements in the jungles. Having placed picquets on the sites of the destroyed villages our forces then systematically ambushed the enemy paths and cultivations, and searched out and destroyed the hidden stores of grain on which the enemy depended for his sustenance. When the enemy discovered that it was almost impossible for him to move without coming within the effective radius of our ambushes, and that there was no opportunity of cultivating fresh crops, his morale evaporated. With the alternative of starvation or disarmament he chose the latter.

Nagas.—The Nagas have only within recent years become known to us in the military sense. They have proved brave foes who even when they have received heavy casualties are prepared to continue the fight.

Kachins.—Up to the present the Kachins have, as a rule, been incapable of a sustained combined effort. This is due to the lack of influence of their “duwas” or chiefs and the fact that there is no outstanding personality who is able to raise them above their petty feuds. But the Kachin is a worthy fighter and especially when allowed to choose his place and time, he has on countless occasions fought with determination and courage.

A few incidents that occurred during the pacification of the Kachin country are detailed below :—

In November 1886, a band of Kachins entered the stockaded fort at Bhamo by night, and killed 3 sepoy, afterwards setting the barracks on fire.

In May 1888, 400 Kachins attacked the fort at Mogaung. They were defeated after heavy fighting with considerable losses on both sides.

In 1888-89 it was necessary to send out 4 expeditions against the Kachins.

In February 1889, a party of 50 Military Police came in contact with the Kachins at Malin and after losing 2 killed and 10 wounded, were forced to retire and abandon their baggage. A force of 50 British troops, and 150 Indian troops with 2 guns, sent out to exact reprisals, met with strong opposition, and sustained heavy casualties before defeating the enemy.

In 1891 in the Bhamo District, owing to carelessness on the part of a sentry, a party of Military Police lost 2 killed and 10 wounded.

In the Myitkyina District in 1893 the Kachins surprised and burnt down part of Myitkyina and attacked Sima post with a body 500 strong. The operations around Sima lasted 7 weeks and altogether 1,200 rifles were employed and 3 British Officers were killed and 2 British Officers and 102 men were wounded.

In 1914-15 there was a widespread rebellion in the Kachin Hills, in which some severe fighting occurred before it was subdued.

An enemy plan.—One plan which was put into operation by the Chins, with a view to the destruction of our columns when traversing a narrow valley in their country shows great ingenuity. Generally, the valleys are covered with thick jungle grass, which in the dry season is very combustible. The Chins set fire to the grass, and the flames spread rapidly. The first tendency on the part of our column was to retire from the advancing flames to the flank. Fortunately, realizing that the fire was in all probability an enemy ruse, orders were given for the column to hack its way through the burning grass. This saved the situation for it was afterwards discovered that the hills towards which the fire was spreading were thick with the enemy, who had fully anticipated that our column would keep in front of the rapidly advancing fire.

This plan is one which may easily be repeated.

PART II.

The Principles of War and the Plan of Campaign.

In this part is given a summary of the effects of the characteristics of the Burma Frontier tribes, and the country, on the methods of applying the principles of war.

(1) *Maintenance of the Objective.*

Whilst ever holding in view the fact that the ultimate aim is normally the destruction of the enemy's forces, it frequently happens that it is impossible to induce him to collect except by an advance by our columns to a particular locality. In this case the occupation of his country is only a means to an end. In the guerilla war which normally follows the defeat of the enemy, destruction of his crops is an effective way of ensuring his early surrender.

(2) *Offensive Action.*

Tribesmen are extremely susceptible to moral influence, and it is most important that no hesitation, delay or retrograde movement, come to their knowledge. They are extremely quick in interpreting any signs of these, and the results are generally unfortunate. A vigorous offensive, strategical as well as tactical, is always the safest method of conducting operations against this description of enemy. The tribesman has no complicated organization. He requires little transport and can disperse at will. A crushing blow is necessary. Care should be taken not to induce him to abandon a position by too obvious a display of force.

(3) *Surprise.*

Owing to the density of the jungle on the steep hill sides, and the utter impossibility, in most cases, of our troops being able to travel other than on the mountain tracks, and owing to the fact that the enemy is living in the jungle with ample opportunities of seeing without being seen, surprise is extremely difficult of attainment. It is, however, possible by night movements and ruses, to outwit the tribesmen, and if successful, the results are more than proportionate to the effort.

(4) *Concentration.*

The limited size of the columns which can operate in the mountainous and thickly wooded country, the long and vulnerable line of mule and coolie transport which must accompany the column (and which must be defended), the difficulties of communication; the very limited number of roads which at best are but mountain tracks requiring constant toil to maintain them in a moderate condition, the delays due to the impossibility of ferrying a force across the swollen rivers (on many occasions these streams become impassible without warning and in a very short time) are in whole or part responsible for dissipation of strength, and render the concentration of as strong a force as is desirable at the decisive time and place almost impossible of attainment.

(5) *Economy of Force.*

The impossibility of moving large bodies of troops in this kind of country makes it essential that the smallest force compatible with the ability to deal effectively with the enemy should be employed.

(6) *Security.*

The characteristics of the country and of the people make it most essential that steps be taken for the protection of the column when on the march or at rest. Precautions and vigilance should never be relaxed, otherwise the enemy is quick to take advantage of any slackness. Darkness and dawn, when our forces are at rest, are especially difficult periods. Reconnaissance, even in conditions of quiet, is very important, and should invariably be carried out and every endeavour should be made to guard against the possibility of surprise.

(7) *Mobility.*

The nature of the terrain and the slowness and the comparative unsatisfactory nature of coolie and mule transport, greatly restrict the mobility of our troops. Every effort must be made to overcome

this disability. This may on occasion be attained by the judicious sub-division of columns, and by lightening the loads carried by the men and also by improving the tracks and bridges over which the column will move.

(8) *Co-operation.*

The tactical co-operation of all arms engaged, and more especially the co-operation of L. G's. while the infantry is very important. The configuration of the country facilitates this in many respects.

(9) *The Plan of Campaign.*

In any campaign the following factors (with others) must be considered :—

(i) Opposition likely to be encountered, the strength, armament of the tribe, and the possibility of other tribes taking joint action against us.

(ii) The size of the column which can march a reasonable distance in the hours of daylight (normally columns are composed of several self-contained units of about 100 rifles with 2 L. G's. for small operations, but the strengths would of course be modified as found necessary).

(iii) The advisability of operating with two or more columns, moving by parallel or converging routes. This is often most advantageous if the difficulties of inter-communication and supply can be overcome.

(iv) Even when organized resistance has been overcome there is generally a resort to guerilla tactics on the part of the enemy, and this may mean a prolonged occupation of his country. The subjugation of the enemy may generally be accomplished by the destruction of his villages, the systematic ambushing of his paths, and cultivations, and the destruction of his crops, combined with the definite determination to prevent him growing the additional crops necessary to maintain him for the year.

(v) *Rations.*—As Military Police columns have on occasions to disappear as self contained units for many months at a time, the organization of the ration arrangements is most important. Bases must be formed for the supply of future requirements, and a strict adherence to a rationing programme is essential. It is impossible to live on the country for any length of time, and in view of the uncertainties of mule and coolie transport (which are the only kinds usually available) a good margin of safety must be allowed to admit of almost certain delays.

PART III.

*Preparations for Column Operations.*1. *Organization of a Military Police Column.*

The organization of the Burma Military Police Columns is essentially different from that of an army column. The necessity for a large proportion of the men of the Burma Military Police being scattered in frontier outposts, the fact that whenever a column is required the number of effective rifles considered necessary is demanded (and not by Companies, etc.), the fact that single company organization is still in force in the Burma Military Police and the necessity for elasticity in the organization all have their effect on the way in which a column is detailed. Improvisation according to the prevailing circumstances is a constant necessity.

It has been found that the most suitable unit for frontier operations in Burma is 100 rifles with 2 Lewis guns. This unit is in every way elastic and may, of course, be altered as circumstances demand.

When a column is in process of being detailed, the men are carefully selected. If time permits they are put through a course of field training prior to the despatch of the column.

The normal organization of a column of 100 rifles and 2 Lewis guns is as follows:—

No. 1 Echelon	A.—Two Platoons	.. 2 I. O's.	66 Ranks
„	B.—Headquarters Wing	.. 1 B. O.	32 Ranks
	Total	.. 1 B. O.	98 Ranks
		2 I. O's.	

No. 2, No. 1 Platoon.

(a) Platoon Headquarters.

Platoon Commander (Indian Officer).

1 Platoon Havildar.

(b) 4 Rifle Sections (Nos. 1, 2, 3 and 4 Sections).

1 N.-C. O. 7 Rifles each

Total strength of Platoon	.. 1 I. O. and 33 Ranks
---------------------------	-------------------------

No. 2 Platoon.

(c) Same as No. 1 Platoon (Nos. 5, 6, 7

and 8 Sections) 1 I. O. 33 Ranks

Total strength Echelon A. .. 2 I. O's. and 66 Ranks

No. 3 Headquarter Wing.

Column Commander (1 British Officer).

Quartermaster Havildar (H.-Q. Section Commander).

2 Lewis Gun Sections (Nos. 9 and 10 Sections).

1 N.-C. O. 6 Sepoys each.

Pioneer Section (No. 11 Section).

1 N.-C. O. 6 Sepoys.

Headquarter Section (No. 12 Section).

4 Signallers.

3 H.-Q. Runners.

1 Bugler.

2 Sowars (1 B. O's. 1 Civil Officer's)

Total strength Echelon B.	.. 1 B. O.	32 Ranks
---------------------------	------------	----------

No. 4.

Total strength :—

Echelon A	.. 2 I. O's.	66 Ranks
-----------	--------------	----------

„ B	.. 1 B. O.	32 Ranks
-----	------------	----------

Total	.. 1 B. O.	98 Ranks
	2 I. O's.	

No. 5 NOTE.

(1) If a third Indian Officer is available the senior one acts as Second-in-Command and is with the H.-Q. Wing.

(2) If Pioneers are not provided the most suitable men can be selected from the Column and will soon become efficient. Their special work is bridge building, road repairs, making rafts and clearing obstacles.

(3) If Chinese mules are used for the Lewis Gun Section the mule carrying the ammunition must be in charge of a sepoy.

(4) A Section Commander and a Second-in-Command must be appointed for each section. Neither should be changed.

(5) Each section must have one trained runner.

(2) *Tents and Tarpaulins.*

Tents are required for British Officers, Indian Officers and the Medical Officer ; but not for the men. In the jungle, tents are cumbersome to load, and, when wet with dew or rain, are unduly heavy

for the transport. The nature of the terrain normally allows of only small camping grounds with few satisfactory sites for tents. In addition, a camp composed of tents may prove unnecessarily conspicuous. The men prefer to make their own *chuppers* (which are rough shelters made of bamboo covered over with branches of trees or bamboo grass). The roofs of *chuppers* are finished with tarpaulins. For this purpose tarpaulins, in the proportion of 1 tarpaulin to three men, should be included in the stores taken. Extra tarpaulins are essential for followers, also for the purpose of covering stores and rations, ammunitions, etc. Roughly 45 tarpaulins are required for a column of 100 men.

(3) *Transport.*

Owing to the absence of roads, and the mountainous nature of the terrain over which Military Police columns are normally called upon to march, the only descriptions of transport available are mule or coolie transport. In the case of mule transport the largest proportion of the mules generally used are Chinese mules.

(4) *Mules.*

The advantages of using Chinese mules are :—

(1) The design of the Chinese saddles is such as to allow of the mules being loaded with comparative ease. (The saddles are constructed in two portions. The load is therefore made fast to the saddle after the latter has been placed on the ground. When loaded the saddle is placed on the mules' back).

(2) The Chinese muleteers are adept at tying and untying the loads. They feed and generally look after their own animals without supervision.

(3) The mules are accustomed to rough fare and to extremely dangerous tracks. They find it possible to accomplish marches over almost any kind of country.

The disadvantages are :—

(1) The muleteers are often impertinent and independent and without an efficient and forceful headman whose orders they will obey, they create difficulties, especially as regards punctuality in the march of the columns in the early morning, and, in camp, as regards mules being allowed to stray as they wish.

(2) The muleteers appear to have a language of their own, and appear to misunderstand orders given in any known language.

(3) The muleteers are inclined to refuse to work without any warning should they feel they have a grievance.

(4) It would be impossible to utilize these men in any operations against the Chinese.

All mules must be inspected and passed as fit for service by a British Officer, prior to their being engaged. When engaging the mules required for a column it is imperative that the British Officer satisfies himself that the mule contractor will provide a competent agent who understands the language of the muleteers, and whose commands will be obeyed. Unless this is done endless trouble will ensue when the column is actually *en route*.

The other points which a British Officer will note as regards Chinese mules are :—

(1) There must be 1 muleteer to 5 mules.

(2) When hiring mules allow 10 per cent. extra for muleteers, kit and rations for muleteers and mules, etc.

(3) That the muleteers have made arrangements as regards providing their own food when on column duty.

The binding up of all loads for Chinese mules should be left to the muleteers.

The muleteer headman should invariably have the order of march explained to him. It must, at the time, be duly impressed on him that gaps in the column due to lack of effort on the part of the muleteers will not be tolerated.

He should also be instructed that the muleteers are to tie up the loads, and have the saddles on their mules ready to load up at a certain hour every morning. Any change in the hour of march will naturally be notified to him in good time.

A Chinese mule carries 120 lbs., *i.e.*, 60 lbs. on each side of the saddle.

(5) *Coolies*.—There are many districts where mules are not available or where for many reasons they cannot be utilized. The only substitute is by means of coolies procured locally.

Coolies are, as a rule, engaged by the Civil Officers, who after estimating the requirements, will normally request the assistance of the local tribal chiefs in enlisting the numbers required.

Sometimes it is possible and advisable to engage some or whole of the coolies required for the whole duration of the operations.

As a rule, however, the coolies are changed at convenient centres, and after having been given their dues, are allowed to disperse.

Whilst accompanying the column they are paid a daily rate, and when discharged from service, they are granted a subsistence allowance (calculated on the basis of a daily march of 12 miles for the return journey) to the original place of enlistment.

A coolie will normally carry 60 lbs. on his back, and 35 lbs. on his shoulder (*i.e.*, a load such as a dhooly, etc.). Normally the loads will be arranged so as to be carried on the back.

The method of calculating the number of coolies required is simple if it may be taken that no rations need be carried for the coolies accompanying the column.

The total weight to be carried, divided by 60, (the weight carried by an individual coolie) gives the number of coolies required (*e.g.*, the weight to be carried is 15,420 lbs. This divided by $60=257$ = number of coolies required).

Should it be ascertained, however, that no rations for coolies are obtainable *en route*, and that the rations must be carried from the base, it is obvious that extra coolies will be required for the purpose. To ascertain the exact number of extra coolies required the "useful load" formula will be adopted.

The total load a coolie can carry is a constant quantity, *viz.*, 60 lbs. If, therefore, part of this load consists of his own rations, the weight of these rations must be deducted from 60 lbs., in order to arrive at the nett weight of column stores the coolie can carry. This nett weight is called "the useful load".

The weight of one day's rations for one coolie may be assumed to be $2\frac{1}{2}$ lbs.

If, therefore, coolies have to carry their own rations for 10 days, the "useful load" per coolie would be $10 \times 2\frac{1}{2}$ lbs. = 25 lbs. and this to be deducted from 60 lbs. = 35 lbs.

But 257 coolies are required for the column when each carries a useful load of 60 lbs.

Therefore $257 \times 60 \div 35 = 440$ coolies are required for the column, when each coolie only carries a "useful load" of 35 lbs.

It is seen that only 257 coolies are required when no arrangements have to be made to carry their rations. Therefore $440 - 257 = 183$

extra coolies are required when coolies' rations for 10 days have to be carried with the column. It will be further noted that these extra coolies will be employed only for the specific purpose for which they are engaged.

The figures may easily be verified by a cross check as follows :—

Number of coolies required to carry 10 days' rations for 440 coolies at the scale of $2\frac{1}{2}$ lbs. per diem

$$\frac{440 \times 10 \times 5 \times 1}{2 \times 60} = 183.$$

Naturally, owing to local circumstances, the weight of a coolie's ration for 1 day ($2\frac{1}{2}$ lbs.) will vary in districts, as will also the number of days' rations to be carried. The only constant figure is the weight carried (60 lbs.) but the "useful load" is easily ascertained.

PART IV.

Protection.

(1) Organization.

The organization must be of an elastic nature. The distances between the units of the column must depend on circumstances and the nature of the country, as must also the distance of the flankers from the main body, the number of flankers detailed, etc.

(2) Hour of March.

The daily hour of march should be so arranged at as early an hour as possible so as to lessen fatigue due to the sun. By arranging to march at the first sign of daylight there is the additional advantage of having all the men awake and alert at the time when hostile action is most probable. It will be found that in the hills a march of 10 miles per diem is a satisfactory distance, especially if much flanking work has to be carried out. The rate of progress of a column is about $2\frac{1}{2}$ miles per hour if without flanking, and 1 mile per hour with flanking. Delays may also occur through the state of the tracks, accidents to the transport, etc.

(3) Guides.

A precautionary measure, which, if possible to carry out will on occasions obviate casualties, is to obtain one or two influential tribesmen from each village *en route*. They are employed ostensibly as guides; but in reality as hostages. In the event of any enemy action being imminent those men, if kept under close observation, would,

willingly, or unwillingly disclose the plot. It is necessary to have these guides marched in an exposed position. It is usual to have one with the Advanced Point. He will be handcuffed, if necessary.

(4) British Officers.

On the march, if sniping is at all probable, British Officers should not march together, nor should they sit together at halts. They should not make it a practice to proceed to and with the flankers or Advanced Point unless it is necessary, nor should they normally go shooting, fishing, bathing or wander in villages unarmed and unattended.

These strictures are not intended to deter the British Officer from doing his duty on all occasions ; but it must be borne in mind that the number of British Officers with a column is very limited, that their responsibilities are great, that the loss of one encourages the enemy, and that owing to the distance a column normally proceeds from its base it is generally quite impossible to replace any casualties amongst British Officers.

British Officers should ride their ponies on suitable occasions on the march.

Admitting that officers may prefer to march with their men and also that a mounted officer offers a more easy target, it is also important to remember that an officer's most strenuous work often begins on arrival in camp.

Rifles.

All rifles will be kept loaded on the march (one round in chamber and safety catch fixed) from the time the column leaves its base. The men should learn to move on all occasions with loaded rifles.

(5) Section Arrangements.

Every section in the column will be proved daily prior to the hour of march.

As, on the march, it is essential that every section be prepared to detail flankers if required, every section will be numbered and told off as follows :—

Nos.	1 and 2	Right flankers	(1st Relief)
„	3 and 4	Left	„ (1st Relief)
„	5 and 6	Right	„ (2nd Relief)
„	7 and 8	Left	„ (2nd Relief).

Nos. 1 and 3 of each section together with the section commander must be in possession of whistles,

It has been found that Section "Naukari" is most suitable for columns.

(6) *Use of Fire by Advanced Point and Advanced Point Flankers.*

If it is known that the country is hostile and that opposition is possible, the Advance Point and its flankers should on occasion be permitted to fire into all danger spots and patches of jungle through which penetration by our men is impossible. This fire should be carefully controlled and only a few rounds are necessary for the purpose. By using this method the enemy's opportunities of ambushing a column are lessened, and he is discouraged. On the other hand, the pace of our column is unchecked, and casualties from enemy sniping are diminished. No tribesman will voluntarily risk the prospect of being killed by an enemy, he cannot see, without being able to fire first.

This method of dealing with an unseen enemy is not a normal procedure should it be the wish of the Column Commander to get to grips with his enemy; but it may be used if it is desired to maintain unchecked or to increase the pace of the column in order to enable it to reach camp before dark, or when the column is in difficulties or when for any reason it is impossible to put out flankers. Fire of this nature has been used with conspicuous success in the Chin Hills and the Naga Hills and the columns who used it completed the operations with comparatively few casualties.

(7) *Method of Flank Protection.*

Generally it is possible by actual practice to make the men conversant with the system of flankers prior to the column's arrival in hostile territory. Advantage should be taken of all opportunities of doing so.

No column, called on to operate in the usual thickly wooded terrain should neglect the precaution of detailing and placing out flankers when the column is *en route*. From the enemy's view point a long straggling column of troops and animals marching along a twisting mountain track and unable to see into the dense undergrowth is the ideal opportunity for employing their favourite tactics of ambushing and sniping. By so doing they can inflict heavy loss with comparatively little danger to themselves, and can delay and disorganize the column. To put out flankers is the only possible way of obviating risks of disaster. Generally, unless sustained or serious opposition is

anticipated, the leading section of the column which furnishes the advanced point will provide "right flankers" and "left flankers", and these should normally prove sufficient for the purpose.

In the event of the column encountering heavy sniping fire it may be necessary for *every section* to send out flankers to each flank.

It will be realized that no flankers additional to those actually required should be sent out. The placing of too many flankers has the disadvantages of unduly fatiguing the men and of retarding the progress of the column.

Flankers must be instructed to keep in touch with the flankers of the section in front of them and with each other. The right and left flankers of the Advanced Party must on no account lose touch with the Advanced Point or allow themselves to advance too far ahead of it or find themselves too far in rear of it. They must be constantly on the alert. They will rush across all exposed places such as narrow necks, cols, open glades in the jungle, etc. All small knolls and hills commanding the track on which the column is proceeding should be encircled. The men soon realize what the most likely haunts of snipers are. Most snipers select ground which commands a bend in the road or ground commanding the summit of a steep incline. Their own line of retreat (regarding which they are extremely sensitive) is generally secured by a steep descent which they quickly traverse as soon as they have delivered their fire. Flankers should give a loud shout and promptly make a determined dash for the sniper immediately they see the smoke of his gun. The Chins have admitted on many occasions that this interference by our flankers invariably spoiled their opportunities of inflicting casualties.

On thickly wooded mountain sides and in dense jungle the flankers quickly tire and they should be relieved as often as circumstances will allow. Half-an-hour may on occasion be a sufficient period of duty. Flankers can move but slowly at any time. When the column is temporarily halted the flankers turn outwards, *fix bayonets*, and act as sentries. On resuming the march flankers immediately unfix bayonets.

At a halt *all the men who have been numbered off as flankers* must do this even if the column when *en route* is depending for its protection on Advanced and Rear Guard flankers only.

In open country it is necessary for flankers to double out to their positions immediately the column halts. It is essential that they

move to their positions with all their senses alert and in instant readiness to use their rifles should the situation so demand. Flankers will be trained to carry their rifles as though tracking big game. The muzzle should point to the ground at an angle of 45° and should be inclined to the left. The butt should be inside of and parallel to the right forearm. This mode of carrying his rifle will enable the flanker to shoot instantaneously at any fleeting target that offers itself.

In close country flankers in a line must keep in sight of the column or of other flankers nearer the column. In this description of country the column must ensure that it does not get ahead of its leading flankers *who should be slightly in advance of the point of the Advance Guard*. Should the country be very close and covered with thick undergrowth it may be necessary to throw out a second or even a third line of flankers for a long column in order to prevent ambushades.

In the thick jungle normally encountered it is not practical to move out flankers while the column is on the move. Therefore a halt is necessary whilst the flankers are proceeding to their positions.

Should one of a pair of flankers be engaged in some such duty as cutting a path his companion must keep him covered during the time.

(8) *Bayonets.*

In dense jungle it may not be possible for flankers to move with bayonets fixed. It is important, however, that men be trained to move wherever possible with bayonets fixed. Bayonets should normally be fixed when flankers are traversing scrub jungle, tall grass, etc., and on all occasions in which this procedure would appear possible and advisable.

The rear point and flankers should never fire unless they have a definite target or are being heavily sniped. Fire from the rear engenders uncertainty throughout the column, disorganizes the transport and may cause casualties to our own column if it is proceeding along a winding track. It may, however, be necessary for this portion of the column to open fire in the case of an evacuation of enemy, village or camp.

(9) *Obstacles.*

Whilst the column is on the march it will probably be discovered that trees have been felled so as to block the road, or the road has been damaged or blocked by huge boulders. Obstacles of the nature of *panjies*, stockades, and stone shoots may also be employed by the

enemy. In encountering any obstacle, the vicinity should first be well reconnoitred in case an enemy attack is projected whilst the column is closed up and delayed by the obstacle.

This reconnaissance is the duty of the Advance Guard and they, assisted by the pioneers, will also endeavour to remove the obstacle if possible or whilst the Advance Guard is undertaking the protection of the Main Body, parties of the Main Body will clear the road, or will cut a path through the jungle so as to be able to march past the obstacle if it proves too difficult to remove *in toto*.

(10) *Action in case of Enemy Attack.*

If firing takes place when the column is *en route*, it may be due simply to snipers or it may be the prelude to an organized attack.

In the case of snipers, it is the duty of the flankers and the Advanced Party to deal with them, or in special cases, it may be necessary to detach a Section from the Main Body, for the purpose. But in any case it must be borne in mind that it is one of the primary objects of the enemy to impede the progress of the column and from the point of view of the column as little delay as is possible should be incurred.

In the case of an enemy attack the Column Commander will deal with it according to the varied circumstances. A Column Commander must remember that disciplined troops with modern rifles are able to deal with a much larger number of undisciplined and badly armed savages, however brave the latter may be individually; and that any hesitancy or premature resort to the defensive is promptly noted by the enemy whose moral is very susceptible to encouragement.

It is necessary for all men in the column to know what their role is at the time of being attacked so that no confusion occurs.

The Column Commander will not disperse his men more than is unavoidable and will keep his reserve in hand until the last possible moment and will use it to the best advantage when such action is necessary.

In the case of minor attack the Advance Guard Commander may be able to deal with it without delaying the Main Body to any great extent.

In case of a strong enemy attack the baggage mules must either be parked in a suitable position (or in the case of coolies, collected

together) or may be ordered to follow the Main Body after the supporting and Reserve Sections according to circumstances. The chief point is that the Officer-in-Charge of Baggage must be aware of what is happening, and must have definite orders as to his action.

After the enemy has been repulsed it is not, as a rule, wise to allow the troops to continue the pursuit for any distance. To do so is to disperse the column so as to be unable to deal effectively with any enemy action from another direction and might lead to grave disaster. It also, at best, delays the column.

Should the enemy be encountered in such numbers as to render it impossible to make a further advance during that day, the Officer-in-Charge of Baggage will be ordered to select a suitable defensive position as a camp, and this being accomplished, the column will retire to the site slowly and without confusion, or it may be more advisable to secure a suitable site near the scene of action and the baggage will advance to it.

PART V.

Protection When At Rest.

(1) *Preparation of Camp.*—Selection of site.

On the arrival of a column at the place at which it is intended to halt for the night, or for a longer period, it is necessary to select the most suitable site for a camp. *The first essential is that the camp be easily adaptable for purposes of defence.*

In the country normally traversed by our columns the existence of continuous thick jungle renders it a difficult matter to discover a site sufficiently clear and open for a camp, and having a perimeter which can easily be defended. It is undesirable to select a camp site which does not allow of a good line of fire and which is surrounded by impenetrable jungle at a short distance from the perimeter.

If there is a Civil Officer accompanying the column he usually desires to camp in or near a village as this facilitates his receiving information, and from the military point of view a village has on many occasions provided the most suitable site for a camp. Usually the jungle around it has been cleared to a considerable distance, and water is readily available. Also the site of the village was probably originally selected by the tribesmen with a view to its being easily adaptable for defence. It is important that camps be as small and compact as possible, so as to simplify the problem of defence.

On the Advance Guard reaching the place selected the Commander will be responsible for the defence of the column until the defence is taken over by the Column Commander.

Prompt search should be made in the immediate vicinity of the camp and any enemy encountered driven away. Picquets will be posted as required on the most commanding points. These will return to camp only when ordered by the Column Commander. The Rear Guard will also post picquets until the camp is prepared and the Column Commander orders their withdrawal.

If it is intended to camp in a village looting will not be allowed. Any supplies required will be arranged for by the Column Commander in consultation with the Civil Officer (if one be present). Precautions against fire are essential in a village.

If the site selected is in the jungle, then after due precautions against surprise have been taken, half of the strength of the men available will be detailed to clear the ground with kukris, Kachin dahs and any other effective weapons. The remainder of the men will remain under arms and will later relieve the working party. Whilst at work the men of the working party will either sling or ground their arms. All followers available will assist in cutting the jungle.

In clearing a camp site it is often found advantageous to leave intact a thin belt of jungle around the camp. This acts as a screen from the view and fire of the enemy. The ground beyond the belt of jungle should be cleared as much as possible. Trees should be felled so that their branches fall outwards and thus form a rough *abbattis*. Until the camp site is ready to receive personnel and animals all mule transport will be parked and all coolies collected in a suitable place.

(2) *Picquets.*

If time does not permit of the construction of a defensive perimeter it will be necessary to post picquets around the camp at night but a definite area for defence must be allotted to platoons.

Picquets must be self-contained and must be as small as is compatible with the object for which they are employed.

Men detailed for picquet duty must exercise every precaution in moving to their positions. They should provide themselves with cover either by digging or by building immediately they arrive in their positions.

Men proceeding on picquet duty have generally to undertake the ascent from valleys to picquet heights (usually after a tiring march).

They thus arrive in a state of perspiration and this is a constant cause of severe chill. It is therefore essential that men on night picquet should take warm coats or blankets with them if those circumstances apply.

Picquets should be instructed that in the event of any hostile attack they must hold on to their position at all costs. They should also understand that any firing at night on their part is to be strongly deprecated unless they are compelled to do so in repelling an attack in force.

Sufficient stores, ammunition, food and water, etc., must accompany the picquet.

The positions of the picquets should be selected by the Column Commander.

(3) *Enemy Tactics.*

During operations against these tribesmen it has been found that they habitually endeavour to creep unobserved into our camps at night with a view to stealing whatever is available; they are also partial to heavy sniping. If these practices occur the great deterrent is to allow parties of our men to lie out at night to deal with the enemy. The Chin especially is very sensitive as regards his line of retreat and any harassing of our camps is effectively dealt with by counter-harassing by means of ambushes.

Dawn is the enemy's chosen time for stalking our sentries and for attacking or pouring volleys into our camps. The enemy knows that at this time he is more likely to find the camp less effectively guarded, as some of the men may still be asleep, some will be engaged in cooking, some will be scattered about the camp for various reasons, and the sentries feeling the presence of friends around them will possibly be less alert than in the hours of darkness. It is therefore necessary that the camp be fully aroused at a very early hour. Camps will invariably "Stand to" at one hour before dawn.

It is usual to excuse from this duty one man per section in order to allow him to prepare tea for his section before the daily march begins.

PART VI.

Operations. Permanent Outposts.

(1) Unless the enemy is allowed to choose his place and time it is, as a rule, impossible to persuade him to stand his ground and fight, if he is able by any means to withdraw. In order therefore to allow of the enemy being pinned down until all preparations have been

completed, it is of primary importance that he receives no useful information of projected movements, otherwise, unless he is in an extremely strong position, with overwhelming superiority as regards numbers, and with his line of retreat intact, it will be discovered that it is impossible to arrive within assaulting distance of him and thus bring about a decision. If the enemy is able to withdraw it is generally found that effective pursuit is impossible owing to his extreme mobility and his intimate knowledge of the country.

(2) *Secrecy is therefore of primary importance.*—Any information which is allowed to reach the enemy should be of an utterly misleading character. It is therefore essential that any projected attack be kept within the knowledge of few people, other than the Column Commander, until the latest moment.

(3) *Reconnaissance must be thorough and systematic* before final plans are made and an attack undertaken (more especially if the attack is on a flank or in rear). Once a flank attack has been launched, touch between those undertaking the flank attack, and those responsible for the feint attack, is difficult to maintain.

(4) *Attacks on a Village or Stockades.*

The primary duty of a Column Commander in the case of a projected attack on a village or stockade is careful reconnaissance. By means of this it will generally be ascertained that it is possible to take the position in flank or rear. Tribesmen are inordinately sensitive as regards their line of retreat, and generally it may be assumed that the most effective way of dealing with the enemy position is by means of a feint attack from the front with the main attack from one or both flanks, or if possible, from the rear of the enemy's position.

The front of a stockade or village is almost invariably thickly planted with obstacles such as *panjies* (sharp pointed bamboos) and deep concealed pits having sharp stakes pointing upwards from the bottom skilfully, covered over with dead leaves, etc. In the case of a strong frontal attack those obstacles would almost certainly cause loss of life; whereas if the attack were made from a flank or from the rear the enemy's fear as to his line of retreat would speedily compel him to relinquish the fight.

Lewis Gun fire has a very appreciable moral effect on savage tribes and is also very successful in keeping down the enemy's fire if concentrated on the embrasures, etc.

If opportunity offers, men may be told off to creep near the village with lighted torches. These they will throw on to the nearest roofs or any inflammable material.

In attacks on stockades, etc., sited on a height, one of the enemy's methods of repelling attacks is to roll or throw down huge boulders on to the attacking force.

After the capture of a village the men should not be allowed to wander about shooting pigs and confiscating fowls, etc. Under the orders of the Column Commander all property should be collected immediately.

As the column leaves the captured village it is possible that the enemy, unless extremely demoralized, will make an attack or in any case will commence vigorous sniping.

(5) *Return from Attack.*

If the column has marched from a standing camp to attack a village, and is returning after successfully accomplishing this to its camp, it is advisable, if this course is at all possible, to return by another route. If there is but one route available, men should be dispatched from the camp to meet the returning column and to deal with serious sniping. It may be possible for the column to drop parties of men whilst *en route* to the attack. These men should be given orders to conceal themselves and deal with snipers. This procedure should ensure a peaceful return march to the column after completing its work.

(6) *Night Operations.*

In view of the extreme difficulty of controlling men in the jungle at night, it is only on occasions that night operations will be considered advisable. In a case where it is possible for a party to find its way by night to the vicinity of its objective (as where a party leaves a camp at night in order to surprise a village at dawn) the results are often worth the labours involved. It is usual to detail a small party for the work and it proceeds with due precaution, followed by the remainder of the column, at a distance, in order to support the attacking party. Absolute silence during the march, no smoking, no lights of any kind are essential conditions, and failure to observe any of these may not only render success unlikely, but may, on the other hand, gravely endanger the safety of the column. No firing should be permitted during the march, and if picquets of the enemy are encountered the bayonet

only will be used. On arrival at the village the force should be concealed all round. At dawn the attack is made, the village destroyed, etc., and when operations are completed the force returns to its camp.

(7) Operations by Mobile Parties.

In cases where the main forces of the enemy have been dispersed and the pacification of a district is in progress, and conceivably in other circumstances, it has been found an effective plan to dispatch small mobile parties from a standing camp to operate away from the ordinary tracks, in search of small parties of the enemy who are conducting guerilla warfare in the woods and to destroy them and their villages. In these cases it is impossible for mule transport to accompany the forces and the danger, if coolies were used, of their wittingly or unwittingly causing the lurking enemy to become aware of the presence of the pursuing party, renders it necessary for the officers and men to carry their own supplies for the period during which the party will be away from camp. The usual procedure is for the men to carry 3 or 4 days' rations rolled up in a blanket which they carry with ease on their backs. If a body of the enemy is suddenly encountered, the bundles are dropped in a convenient place and retrieved at the conclusion of the fight. By this method of procedure, it is possible to pursue the remnants of the enemy into the furthest recesses of the hills and eventually to compel them to capitulate. It has been found that 3 or 4 of these columns radiating from a standing camp can, if wisely handled, affect the pacification of a district in a short time.

(8) The Defence of a Permanent Outpost.

Scattered along the Burmese frontier are many outposts manned by the Burma Military Police. The strengths of these posts vary from 250 men to 30 men according to their strategic position and importance and the distance from Battalion Headquarters. Each frontier battalion has several outposts under its jurisdiction. The more important outposts are commanded by a British Officer ; in other cases an Indian Officer is in command. The Officer Commanding is responsible for maintaining his outpost in a state of defence at all times and for offensive action as circumstances demand.

The strength of an outpost is fixed with a view to the protection of the munitions, stores, and families of the men (pending their evacuation, if possible) and with a sufficient margin to allow of a *Mobile Column* being detailed and trained to undertake offensive action outside the area of the outpost position, or as a reserve for active defence.

It is essential that a thorough reconnaissance be made of the neighbourhood and of all passes, etc., leading from what might on occasion be hostile territory. The British Officer will be responsible for acquiring a thorough knowledge of the neighbourhood. Reports of all reconnaissances will be preserved in a Route book kept in charge of the British Officer or Post Commander.

Men should be encouraged to learn the local dialects and every man should have an intimate knowledge of the country within 5 miles of his post. Often this knowledge can only be attained by systematic patrolling.

During patrolling exercises, good fire positions should be selected, also places for ambushes, along lines of possible enemy advance.

It is essential that a *Range Card for Defence* be prepared and that all the distances to the most prominent objects in the vicinity be known by all ranks.

Alarm Orders will be prepared in all cases and the following headings should be considered :—

- (a) Action to be taken by all ranks, families, Medical Staff, followers, coolies, personnel in charge of mules, upon the alarm sounding.
- (b) Defensive dispositions (1) By day, (2) By night, (3) Details of Reserve and action to be taken.
- (c) Ammunition arrangements.
- (d) Medical arrangements.
- (e) Administrative arrangements regarding families, refugees and their accommodation and sanitary arrangements, accommodation for animals, their feeding, watering, etc.
- (f) Arrangements for collecting information.
- (g) Signalling arrangements.
- (h) Arrangements regarding water.
- (i) Reports.

Alarm orders will be preserved in a special file after they have received the approval of the Battalion Commandant.

(9) *Advancing by Water.*

It may on occasion be necessary to advance towards the source of a river. In this event the principle is to advance by bounds.

First, the advanced base must be established and consolidated. This is followed by an advance by road to the place at which it is

next considered necessary to halt. Picquets will make good the next line.

In the case of a broad river it is preferable to move on one bank only.

Normally the noise of a fast flowing stream is so tremendous that signal by whistle is impossible. It is therefore necessary to arrange for signals by bugle.

PART VII.

Training.

(1) *Training of Junior Leaders.*—In every way the work of a column is facilitated if the non-commissioned officers are well trained. In jungle warfare control is much more difficult of attainment than in normal warfare and a high standard of efficiency and of self-confidence is necessary. This can only be cultivated by constant and systematic training.

(2) *Panjies.*—Before a column marches into hostile territory every man should be taught to make panjies (sharpened bamboos) and a large number should be taken with the column. They are used for placing around a camp if there is danger of an attack and also for blocking paths in a very effective way. The men quickly become efficient in the making of panjies if shown a sample.

(3) *Training in Field Works.*—It is generally possible to include a certain amount of training in the making of entrenchments, the construction of choppers, road and bridge-making. The more training the men can be given in works of this description the more the progress of the column will be facilitated when actually in hostile country.

THE SOURCE OF DISCIPLINARY AUTHORITY.

By

CAPTAIN H. BULLOCK, F. R. HIST. S. ; INDIAN ARMY.

In the control of military discipline, as in all other matters of State, the Fountain of Authority was the Sovereign, whose word was law. Unable personally to cope with executive detail, the Sovereign had to entrust control to the Constable, his Chief Staff Officer. The latter in his turn handed over much of the detail to the Marshal, the Quartermaster-General of those days.

In the course of time, as will be shewn, the Constable took unto himself an authority so great that it rivalled that of his Sovereign ; so his head was cut off and his office abolished.

Then followed a period of flux. Many other factors combined to dictate a change. Various expedients were tested, and finally the system by which the military offender was tried by a tribunal composed of his own officers was introduced. But the control of the nation itself was changing. Extraneous and more important influences were brought to bear on the source of disciplinary authority ; and Parliament, at first content with a mere inspection of the Sovereign's acts, finally acquired complete constitutional control.

To proceed to an examination of this development in more detail.

The Sovereign.

At the head of the Army, as of the State, was formerly the Sovereign, who (when the occasion demanded it) led in person his armies in the field, that familiar act which we have seen depicted in Shakespeare's *Henry V*, and which was carried into practice for the last time when George II commanded the infantry at Dettingen—not, as is often stated, the whole army.

Much of his administrative authority was delegated by the King to the High Constable, whose duties thus came to include the supervision of disciplinary matters and the conduct of the military and chivalric tribunal usually known as the Court of the Constable and Marshal ; or alternatively as the Court of Chivalry, or Court of Arms.

The Constable.

The Constable's military duties approximated to those of a present day Adjutant-General, whilst the Quartermaster-General

of to-day found a counterpart in the Earl Marshal, who is more often referred to simply as the Marshal. Both he and the Constable had other non-military duties in respect of the royal court ; such as the ordering of the sovereign's camp and the supervision of the royal servants.

For many years the office was hereditary in the family of the Earls of Hereford and Essex, but finally it was found that the Constable had acquired so much authority that it clashed on occasion with that of the King himself. He was considered too powerful for a subject ; and on the attainder and execution of Edward Duke of Buckingham, the then holder, the office was allowed to lapse. For special occasions of state, such as coronations and the trial of high misdemeanours, it has sometimes been revived for limited periods ; but from the early sixteenth century no notice need be given to the Constable in connexion with military discipline.

The Marshal.

On the abolition of the office of the Constable, the Marshal continued to exercise the disciplinary functions of his former superior, and the military tribunal therefore bore the title of the Court of the Marshal or Marshal's Court, a name which is preserved—in a slightly changed but identifiable form—by the present day Court-Martial.

The office of Marshal was formerly held by individual grant from the King, but has from the time of Henry VIII to the present been held hereditarily by the Dukes of Norfolk, though there have been breaks in the continuity of their tenure from such causes as attainders and during the period of the Commonwealth. Never formally abolished, a Marshal's Court sat for the last time in the reign of Queen Anne, though on that occasion it was not for the trial of a military offence—it had lost cognisance of these long before. The Earl Marshal is now deprived of all military responsibility, and is known to the public chiefly by his appearance at such State ceremonies as coronations.

A detailed account of some of the duties of an early Marshal of England may be seen in Grose's *Military Antiquities*, (1786-8), i, 225, from which it will be appreciated that both dignitaries had valuable perquisites. The Constable had first choice of the spoils of battle, whilst the Marshal had but the reversion of what was left. Valuable information is also to be gleaned from Francis Markham's *Five*

Decades of Epistles of Warre, which describes the Marshal's duties at a later date, when he was no longer subordinate to a Constable.

The Decline of Chivalry as a Factor in Discipline.

Step by slow step across the Flander's marshes, spurred by that song which was the very antithesis of such political sentiments as he possessed, the English private of foot advanced all unknowingly along the path which was ultimately to lead to the establishment of the British Commonwealth, murmuring the strains of *Lilliburlero*. From end to end of the Low Countries and back again, and yet again to the Danube, there marched and fought and died the pressed men. Crimped for service at the outset, cramped by their four-inch stocks, burdened by their eighty-pound knapsacks, and endlessly nodding under their tall grenadier caps, yet by their incessant subjection to a savage discipline they achieved Minden and Dettingen. It was indeed in the hearts of these men that the British Empire first became pregnant.

When did chivalry decline, to be replaced by this iron discipline ?

By the chivalric control of discipline was understood that attainment and maintenance of a standard of honour which alone should direct the personal conduct of every soldier in the field ; a code which, deriving its inspiration from the King as the fountain of authority, was reduced to writing at his direction by the Constable of England. The code was detailed and explicit, and was administered by the Court of Chivalry. It was directed rather against possible misbehaviour by the rank and file men-at-arms, archers, pages and sutlers—than against any possible delinquents amongst the officers—nobles, knights and esquires. For it was considered that, owing to their birth, these latter classes possessed an inherent sense of chivalry, and that their peremptory subjection to discipline was unnecessary by reason of their inborn characteristics.

The period of transition, from the original method of maintaining discipline by agreed observance of the chivalric standards to the later procedure of enforcing discipline by a rigid code of laws, is undoubtedly the period which commenced with the Civil War and culminated in the establishment of our standing army.

That chivalry was a vital force in the English Army till then may be seen from the record of the English volunteers in the Low Countries during the reign of Queen Elizabeth ; that reign which was

for chivalry, as for literature, a Golden Age. The chivalric spirit was never more truly exemplified than in the persons of the fighting Veres and Philip Sidney. Sidney indeed adorned both fields—Chivalry and Letters; as Marlowe and even Shakespeare himself may have done. The knightly spirit made as glowing a spectacle at the siege of Breda as on the Field of the Cloth of Gold long before.

By the end of the Commonwealth the position was entirely changed; the Articles of War were directed against officers as well as soldiers; the punishments laid down were stringent to the point of barbarity, according to present-day standards. So soon as the morrow of the Revolution, Parliament for the first time displayed a direct interest in the punishment of purely military offences by passing the first Mutiny Acts, though it is true that 250 years before a statute (only temporarily enforced) had provided for the punishment of desertion by civil tribunals. These Acts, remaining in force for periods which later approximated to one year, gradually encroached on the Royal Articles of War, and postulated not only standard minima of punishments for specified offences, but also regulated the composition of courts-martial, forms of oath, and the like.

Limited Parliamentary Control.

In 1748 the Commons demanded with success that copies of all Articles of War made since the Commonwealth should be laid before the House, thereby appearing to cast doubt on the validity of their issue under the sole authority of the Royal Prerogative. It was not till 1803, however, that Parliament established its right to inspect and approve each successive military code as soon as it was formulated, thus initiating full constitutional control.

Full Constitutional Control.

So in that year came the death-blow of the prerogative; but Chivalry as the Master of Discipline had passed away a century and a half before, wounded by the influence of internecine strife on the national standards of honour and trust, and killed by the inadaptability of a code based on purely moral considerations to the material problems of discipline existing in a standard army.

Chivalry's glorious day was over. It was superseded by the Sovereign's explicit commands, expressed and executed with savage severity. Early in the nineteenth century, as has been seen, these gave way in their turn to a deliberate constitutional procedure, carried

out by and with the consent of the people, who finally achieved complete control on the amalgamation of the Articles of War and the Mutiny Act in one comprehensive statute. Our present Army Act represents that statute to-day.

Vestiges of the Royal Authority.

In various directions there still survives the direct disciplinary authority of His Majesty. For example, the right of every officer of the Army to address his Sovereign on any matter in which he conceives himself aggrieved has been preserved, and is now safeguarded by explicit legislation. Again, the whole structure of the present court-martial system rests on Warrants under the Sign-Manual, issued to the several officers in chief command of His Majesty's Forces; and the Sovereign yet retains, and in some cases exercises, the right of confirming the proceedings of a general court-martial.

These examples of the existence of a living exercise of authority by the Crown can be multiplied; but those given should suffice for the reader to assess the place in our constitutional structure of the Fountain of Authority, as far as military discipline is concerned.

WITH THE XIII DIVISION SIGNAL COMPANY IN GALLIPOLI.

By

BREVET LIEUT.-COLONEL H. E. CROCKER, C.M.G., D.S.O.,
THE ESSEX REGIMENT.

After six months' strenuous training, we entrained on the night of the 13-14th June, 1915, and embarked at Avonmouth, for Mudros. Our horses and vehicles were left behind at Alexandria, and the remainder of the company disembarked at Mudros on the 5th July. We had our complete outfit with us, except the horses and vehicles, and how we were going to man-handle the heavy D5 cable up and down the hills and valleys of the Peninsular remained to be seen. The drums of cable weighed a hundredweight, and could be carried by two men on a special kind of stretcher.

After a few days, our division was sent up to Helles to relieve the XXIX Division, which came to Mudros for a rest.

We remained a few weeks at Helles, during which time we underwent our baptism of fire, and had a useful experience in the way of keeping communication open in spite of heavy shelling and rifle fire. The cables were cut several times a day, but thanks to an elaborate system of "laddering," we could always get through by some route or another. Our headquarters were in the Gully Ravine, a deep narrow ravine running northwards towards Krithia from the toe of the Peninsular. It also served as the principal line of communication to the front. The heat under the July sun was most trying, and the combined smells were overpowering. Flies awoke in myriads, and swarmed over everything. The heat, combined with hard living and bad water, soon told on the fresh troops, and sickness became rife. We only stayed there for about three weeks, and then returned to Mudros.

About this time preparations were in progress for a big push on the Sari Bahr position, possession of which would permit of observation to the Narrows. The 29th Division were to return to Helles while the 13th Division were destined as reinforcements to the Australian and New Zealand forces at Anzac.

Our Division soon had orders to move to Anzac, and brigades were sent up separately. The Signal Company was the last to go, and we had orders to take only such gear as we could carry by hand, an order which, if carried out, would have abandoned all our cable. We disobeyed orders sufficiently far as to take a certain amount, but

were unable to land even that small amount, as the Master of our ship felt nervous as dawn approached, and cleared off, carrying several miles of our precious cable with him. It took a long time before we could get it sent up again, and meanwhile we had to borrow what cable we could from the Anzac Signallers. On arrival, we found that instant cable communication was required to each of our three Infantry Brigades, and, in addition, to several detached forces, composed of mixed units. The only means we had of carrying the heavy cable was by man-handling it on the stretchers, and this, we found at once, was a practicable impossibility over that country. Luckily we were able to borrow several hand drums from the Anzac Signal Company. I never could understand why we were the last to arrive. Communication is always required at once, and the Signal unit, or at least the headquarters and essential details, should have been among the first to arrive. We soon found out where the brigades were situated, and communication was quickly established.

Divisional Headquarters were installed in a little re-entrant in the cliffs overlooking the sea about one and a half miles north of Anzac Cove, close to what was known as "Old No. 3 Post." This was a post which had been made by the Australians, as marking their left flank. From it we could obtain a magnificent view over the Suvla Bay country and the Salt Lake to the north. We were close to the edge of the sea. Our troops were at that time holding a scattered line about half a mile or so inland, holding on to the crest of the ridges by their eyelids, so to speak. We were, literally, between the devil and the deep sea. Communication to the front lines was carried out along the three valleys which ran up from the sea shore to the hills above. There was one just south of us, while the Chailak Dere and the Arghil Dere were to the north. All three were under observation by the Turkish snipers, and as we went along, we had to run the gauntlet. Sentries were posted at well-known danger spots to warn the unwary passer-by, and the warning—"Run like hell, Sir, there's a sniper up in that hill," made us sprint round the corner at best speed. These "Deres," or valleys, offered admirable lines of communication, along which we placed our cables, hitching them up to trees where safe from bullets. Our headquarters, by the way, were under incessant rifle and machine gun fire, and every evening, bullets used to come down in swarms. Several men were hit just outside the signal tent.

The big push was to take place on the 7th August, and our division was to assault the left of the line, against the Turks' right, while the Anzac troops were to make a direct drive on to Sari Bahr, and the hill system to the south of it.

The columns formed up and started under cover of darkness, so as to arrive at their appointed places, whence they would make the final assault by day-break. Our 39th Brigade was already in position on our right, where they were in touch with the left of the Anzac troops. The 38th Brigade, already in the Arghil Dere, the more northerly of the valleys, had to advance by night until they struck a narrow track on their right leading over the divide down into the Chailak Dere. They were then to cross the Chailak Dere, and find their way up the hills to a point that would bring them on the left of the 39th Brigade. The night was pitch dark, but they had guides. The 40th Brigade acting as left flank guard to the whole force, was to march along the sea shore until clear of the hills, and then to take up a position on the Damajelik Bair.

Each brigade had its Signal Section, the cables to the 38th and 40th Brigades being carried by hand. Each Signal Section had a Subaltern Officer in command of it.

Communication to the 39th Brigade was already established, and needs no comment.

The other two brigades started off, and from time to time we heard that all was well. Then nothing came through for some time, and we had no idea of what was happening. In the pitch dark, it would be no easy job to find the way, and the G. O. C. was becoming nervous. At length we had news of the 40th Brigade. The Signal Section had fallen behind owing to the difficulty of man-handling the heavy cable in the dark, but all was well. In due course we heard that the brigade had reached its destination without further adventure.

With regard to the 38th Brigade, things were not so well. They advanced up the Arghil Dere without much difficulty, and duly found the path over the divide, and descended into the Chailak Dere. Here their real troubles began. The path was rough and narrow, and the men, partially trained, and weighted down with their equipment, soon became exhausted, and straggled. Officers were themselves out trying to close up the long files of men, which, in spite of frequent halts, could hardly be urged on through the night. At length the Chailak Dere was reached, and the guide essayed the almost impos-

sible task of finding the track which led to the position of assembly for the brigade. They had by now arrived in a small circular opening in the Dere, from which the track debouched. He went round this opening four or five times before he found it, as was evident from the number of circuits of cable laid by the cable party. The whole place was wrapped in cable.

This check gave an opportunity to the men to close up, and the brigade resumed its scramble up the path to the spur on the left of the 39th Brigade. At length the guide assured the Brigade Commander that he had reached his destination, and the fact was duly reported to Divisional Headquarters. What happened after that is uncertain. We heard from the survivors of the Signal Section that every soul lay down where he was and slept, trusting to the assurances of the guide. They had a rude awakening. As the day broke, they found themselves close to the "Farm," in a hollow in the hills well in front of our lines, and almost surrounded by the Turks. Immediately a heavy fire was poured into them at close range, and then the Turks charged. The brigade, exhausted and half awake, was in no condition to make a successful resistance. They fought it out where they stood, each man fighting for his life, and the Turks paid dearly for their success. Officers and men fought side by side with revolver, clubbed rifle and fists. The Brigade Commander and the Signal Officer were killed in the front line, fighting to the last. The survivors made their way down the Chailak Dere, where they were reformed by the Staff Captain, and took up a position to stem any pursuit, but the Turks did not follow them up. It would have been suicide for them to have crossed those ridges exposed as they would have been to the fire from our ships' guns.

I have no desire to enter into a long account of these operations, how nearly we achieved our object, and how we advanced our line some considerable distance.

In 1922 I had an opportunity of revisiting the Peninsular, and was taken round the Sari Bahr positions by a Turkish Officer who had fought against us there. His battalion had, apparently, attacked the 38th Brigade, and he described their feelings of amaze when they woke up and found the brigade out in the open beneath them.

For the remainder of August the position at Anzac was one of stalemate. If we could not move, no more could the Turks. Fresh columns were formed, and units were transferred from one command

to another almost daily. One or more companies of some battalion would be sent off to someone else's column for a few days, and then returned. It all made the task of maintaining communication rather complicated. Cables were frequently cut, and the task of repairing them, under the fire of the snipers, who kept appearing at unexpected places, was quite exciting. On several occasions, while up a tree with the cable, I heard the smack of a bullet in the trunk below. There were all kind of wild descriptions of Turkish snipers—one was supposed to be a woman, painted green. I certainly found a large hollow tree where a sniper had evidently taken up his abode, for there were several water tins, and a large pile of empty cartridge cases at the base of the tree.

At the end of August we moved to Suvla Bay and took over part of the line from the 54th Division. General Shawe had left us, and we now had General Maude as Divisional Commander.

We had all three brigades in line, the 38th on the right on Chocolate Hill, 40th in the centre, and the 39th on the left; on the right of the 29th Division. Our headquarters were established in some large dug-outs excavated in the cliff overlooking the sea, well out of rifle range from the front, which was a welcome change. By now we had all the cable we required, and at once organized a complete cable system to the front brigades, besides a good many other centres, such as a naval forward observation post, and several others.

The hill of Lala Baba was prepared as a forward battle centre, and complete cable communication was installed, duplicating the main lines which would be switched on to Lala Baba if required. As this hill was much exposed, all cables were buried at least 6 feet deep. The main cables to the front were led along either bank of the Salt Lake and were supported on fir poles, each brigade had three separate cables leading to its signal office, while a central "main artery" cable was laid through the bed of the Salt Lake, at that time quite dry. This cable was the only one that continued working during the three days of the great storm in November, which speaks well for its insulation. Corps Headquarters, on the point of the bay to the north, laid a deep sea cable of D5 wire to us through the bed of the sea, which never ceased working throughout the operations.

All cables near Divisional Headquarters were buried deep in the ground, but even then were frequently cut by shells. One day a shell

entered the signal office, just missing my head. Luckily it was only filled with sand.

We had great trouble at night from the ration convoy which used to trust to our cable poles for guidance on their way to the front. They would often tear down a few of the poles and wind the cable up round the wheels.

The great storm in November was a good test of the efficacy of the communication system, and it never completely broke down. The cable through the lake worked, but the others were all "dis" at once, owing to breaks. The linemen were out at intervals all night, and we kept them repaired as quickly as we could find the breaks. In the meantime we carried on with lamp, and the one cable, which was switched through to all brigades. All the Brigade Signal offices were flooded out, which occasioned some delay.

The storm started with heavy rain, which rapidly turned to sleet and snow. The trenches were flooded, and several men were drowned. There was nowhere to go, and no possible chance of drying clothes or preparing hot food for the moment. The Division lost heavily through cold, exposure and frost bite. The storm passed away as rapidly as it came, and we had glorious weather till the evacuation in December.

We learnt a good many lessons from this campaign, from the Signal point of view, such as—

1. Headquarters and essential details of the Signal Company must go on in advance with Divisional Headquarters.
2. In country where horses and vehicles are not possible, a lighter cable should be carried, preferably D3 and wound on a lighter drum, such as the Indian pattern.
3. Good insulation is essential. This seems obvious, and yet some of the D5 cable was so badly insulated that the line went "dis" at the first shower of rain.
4. The value of the "Main Artery System," though not then properly realized, was proved on several occasions. For instance, communication to the three brigades at Suvla depended more than once on a single central cable laid through the bed of the lake. The value of frequent ladder-ing was amply demonstrated.

Fresh gear is devised, and new methods are constantly taken into use, but the old principle of the Signal Service stands for all time :—

"Communication, once gained, must never be lost."

MILITARY NOTES.

AFGHANISTAN.

The King's European Tour.

The King's tour commenced according to plan. His Majesty arrived with the Queen and his suite at Chaman on the Indo-Afghan frontier on 10th December, at Karachi on 11th December, and at Bombay on 13th December. The party then sailed in the P. & O. s.s. "Rajputana" on 17th December. After making a brief halt at Aden on 21st December, the King disembarked at Port Said on 26th December for a visit to Egypt. The next item on the programme is a visit to Italy which will be undertaken early in the New Year.

Aviation.

On 28th November a Russo-Afghan agreement was signed at Kabul establishing a regular joint air service between Kabul and Tashkent.

ARABIA.

South-West Arabia.

On 29th September an important raid into the Aden Protectorate was carried out by Zeidi tribesmen supported by regular troops. After penetrating as far as the neighbourhood of Turan the raiders withdrew northwards, leaving detachments within our Protectorate limits. This incursion was made in direct defiance of the warning which had previously been sent to the Imam of Sana'a. Our aircraft from Aden therefore flew over the affected areas on 4th October and dropped further warnings to the effect that bombing would be commenced on 6th October if any raiding parties still remained on our side of the border on that date. On this occasion our warnings proved to be effective. The Zeidis withdrew within the time limit imposed and, despite rumours that renewed raiding was impending, no further incidents took place during the month of October.

Nejd.

During November and December several raids were carried out by Akhwan of the Mutair tribe into Iraq and Koweit territory, which

resulted in the death of a number of Iraq nationals and considerable material loss.

Retaliatory action was carried out by the air and military forces in Iraq to restore the situation.

BELGIUM.

"Bulletin Belge des Sciences Militaires."

Published by Imprimerie Topographique de l'I. C. M., Brussels.

Price, 3 francs.

October, 1927.

1. *The Problem of Security.* (Continued.) *War of 1870.*

By Major Barthélemy.

Of historical interest.

The author, discussing the question of strategical security in war, bases his arguments on an incident in the 1870 campaign, when the French Army decided to offer battle to the German Army on the Moselle. The conflicting opinions of Moltke and Prince Frederick Charles as to how the attack on the French should be undertaken forms the subject of this article.

Moltke's views as to the mission of an advanced guard, with regard to obtaining information as to the enemy and to securing manœuvring space for the main body, when in close proximity to the enemy, as illustrated by the fighting on the Moselle, are of interest.

The article ends with a discussion of the manœuvres of the French and German Armies on the Meuse. The strategical problem under discussion is whether a co-operating army of observation could insure the security of an investing army (that of Frederick Charles) against the attempts of a relieving army (that of McMahon), whilst at the same time threatening the latter's line of communication.

2. *Doctrines with regard to the Employment of Artillery.*

(Continued). By Captain Béretzo-Colet.

Of interest.

The subject discussed in this article is the employment of artillery before the attack and the question of creeping and stationary barrages. The writer quotes regulations on this subject from the leading European armies—Germany, France, Belgium and our own F. S. R., Vol. II.

In conclusion the writer gives interesting examples gleaned from the experience of the above quoted countries in the Great War.

3. *The Conception of Manœuvres in Small Infantry Units.*

(Continued). By Major de Cae.

Of little interest to the British Army.

In this article the author discusses the tactical employment of infantry units within the battalion, i.e., companies, platoons and groupes with a view to laying stress on the absolute necessity of combining fire with movement, as also on the co-operation of flanking units with the unit primarily concerned in carrying out the allotted task.

Instances are given from the war where the adoption of these principles, or the failure to appreciate them, led to success or failure.

Frequent references are made to the Belgian Infantry Regulations, with a view to showing that they have been drawn up in support of the principles advocated.

4. *Methods of Artillery Fire by means of Biaxial Observation.*

(Continued). From the work of Lieut.-Colonel.

5. *The 2nd Ballistical Problem from the work of V. Burzio.*

(Continued).

Two very highly technical and mathematical studies of artillery, of interest only to the scientific branches of artillery.

6. *The Offensive: Attacking the weak spot, from the work of Major Van Overstraeten. "Des principes de la Guerre à travers les ages."*

Of historical interest.

The guiding maxims of this work are that "The destruction of force is the essence of the battle" and that "the offensive is the mode of action best calculated to enforce the will to destroy the adversary's forces. The offensive alone imposes this maxim on the enemy."

The writer goes on by historical and modern references (taken from the campaigns of Napoleon, Gustavus Adolphus, Moltke, Ludendorff, Joffre and others) to demonstrate that history proves that the great captains have always adopted the offensive on the battlefield. They were careful to choose the moment for the offensive, when their numerical or moral ascendancy was assured. They thus placed themselves in the ideal conditions to insure victory.

The principle of attacking the enemy's weak spot constitutes one of the most precious lessons in military history, which should be

acted up to by all commanders, from the army commander to the smallest unit commander. Historical and modern examples in war are given with regard to this maxim.

November, 1927.

1. *The Defence of the Territory.* By Lieut.-Colonel Hans. Of interest from the point of view of Belgium as a military factor.

This article propounds the doctrine that for the adequate defence of a country, the industrial and military mobilizations must synchronize, and at the same time produce the maximum output of strength. This subject is dealt with principally from the point of view of the problem confronting Belgium at the present day. The two main principles discussed by the writer are first that the military spirit in Belgium is produced alone by the military training given during the periods of military service, and secondly, that the interpretation of the word "army" is "the nation in arms," meaning the mobilization of the country as a whole.

2. *A Study of the Problem of Fire Concentration.* By Major Smedts. (To be continued). Of interest to the artillery.

A technical and statistical study regarding the employment and effect of artillery fire under varying conditions, showing the predominant effect of artillery fire in modern warfare, as compared with all other offensive armaments. An extract from French medical statistics is given, proving that in the last war casualties caused by rifles and machine guns were 23 per cent. and by shell fire and grenades 67 per cent.; the percentage of wounds caused by grenades was low, nil for the early battles of the war and nearly nil at the end of the war.

3. *Protection of an Army Corps on the March by Anti-Aircraft Artillery.* By Major Molhant. Of interest to the artillery.

Another highly technical article from the point of view of anti-aircraft artillery, in which the possibilities of anti-aircraft work by artillery during the movements of an army corps are discussed. The two chief questions dealt with are:—

- (1) Insuring adequate protection to the main body of the army corps, which entails placing the anti-aircraft artillery in the forward zone and consequently rendering it inoperative against such of the enemy's aircraft as may have traversed

its zone of action and are directing their efforts against the rear of the army corps.

- (2) Restriction of effort to defending vital points or regions which are affected by the line of march selected by the army corps.

4. *Military Re-organization in France and Length of Service.*

Of interest as a study of conscript armies,

The writer groups his subject into the following paragraphs :—

- (1) The manner in which the problem presents itself to France.
- (2) The solution of the problem.
- (3) The preliminary conditions required before coming down to 12 months' military service.

The conclusions which the writer comes to so far as France is concerned, are as follows : French military projects are based on the existence of a peace army strongly encadred and thoroughly instructed, capable of warding off by means of rapid mobilization, any sudden attack and at the same time to allow the main army and nation as a whole to develop its full strength in the time limit allotted to it.

December, 1927.

1. *Operations of the Belgian Army, 1914-1918. (Continued.)*

Day of the 25th October, 1914.

Operations between the Sea and Nieuport.

In continuation of the events recorded in the November number. One battalion from the French 42nd Division was despatched to Dixmude to reinforce Admiral Ronarch. During 25th October two French Territorial battalions from Dunkerque were placed at the disposal of General Grossetti. On the evening of 25th October the Germans attacked on a front held by two battalions of the French 84th Brigade, defending the sector in front of Nieuport. The attack was repulsed.

Operations between Nieuport and Dixmude.

The 25th October passed without any important events on the front held by the 2nd Belgian Division. On the front of the 1st Belgian Division the commander realised the urgent necessity for the relief of his exhausted troops and of his worn out artillery material.

No event of importance occurred on the front held by the French 83rd Brigade, which had been withdrawn from the French 42nd

Division, to the neighbourhood of Stuyvekenskerke, and was placed between the 1st and 4th Belgian Divisions.

The operations in front of, and to the south of Dixmude are next described on pages 495—496. The 25th October may be said to have passed off without any important incident.

The operation order for the 26th October is published on page 499.

The chapter ends with an interesting account of the arrangements made both by the Belgians and by the French for inundating their fronts, should the necessity arrive. So far as the French were concerned, the inundations were for the purpose of protecting Dunkerque. Pages 500—508.

2. *The Belgian Effort on Lake Tanganyika during the War of 1914-1918.* (Continued). By Captain Weber. Chapter IV.

Of interest. *Part I* continues the narrative of the November number with regard to the conquest of Lake Tanganyika, and begins with the description of the action of the two British gun-boats "Mimi" and "Toutou," under the command of Commander Simson, resulting in the capture of the German gun-boat "Kingani" and the destruction of the German gun-boat "Hedwig."

Part I ends with an appreciation of the operations of our flotilla under Commander Simson.

Part II deals with the arrival of the Belgian Colonel Moulaert, who took over the command of the transportation services of Lake Tanganyika, and gives his appreciation of the steps which were still required to gain the mastery of the lake transportation.

Part III reviews the Belgian dispositions and the situation generally at the moment when Colonel Moulaert took over command.

Part IV describes the organization of the naval base at Albertville and ends with an account of the construction of new lake gun-boats and material.

3. *The Motorization of Artillery.* By Major-General Pierret.

Of interest. The writer enters into a lengthy discussion of the arguments applicable to all modern armies, regarding the value of the mechanization of artillery of all descriptions as opposed to horse drawn artillery. He sets forth the advantages and disadvantages of both descriptions of transport in an instructive manner.

On page 537, he discusses the three descriptions of mechanized artillery, i.e., "Artillerie portée" (guns and limbers carried on lorries) "Artillerie Tractée" (tractor drawn guns and limbers) and "Artillerie sur affut automoteur" (artillery on mountings fixed to a motor vehicle for anti-aircraft work).

On page 539 the writer discusses motor drawn artillery in connection with every description of artillery used in the field.

On page 546 the resources in material, personnel and accessories such as petrol and oil are considered. The writer ends his chapter by reviewing what has been done in the various European and American armies in the way of mechanization of artillery.

4. *Tanks.* By Major Lievin.

Of interest. Certain technical considerations regarding tanks. The author divides his work into two parts:—

A.—Tanks of accompaniment.

B.—Heavy tanks to break through the enemy's position.

The chapter is illustrated with pictures of various types of tanks, chiefly French, and the heavy British Mark VIII tank (a model built for the 1919 offensive). Also the Italian 40-ton Fiat tank.

This work on tanks is the first which has appeared in the "Bulletin Belge" and will be continued.

5. *Study of the Problem of Fire Concentration.* By Major Smedt. Of interest only to the artillery.

A highly technical and mathematical treatise on artillery fire.

CHINA.

THE SITUATION.

1. *Civil War.*

The month of September as particularly quiet as regards fighting in China. This may be explained largely by the fact that harvesting was in progress over a large part of the country.

The month of October has seen a renewal of hostilities, the most important of which has been the campaign between Yen Hsi-Shan, the Governor of the province of Shansi, and Chang Tso-Lin, the Generalissimo of the Northern allies.

For some years Yen had maintained an attitude of neutrality towards the Chinese civil wars. Although during the Nationalist advance to the north in the summer, he announced his adherence to

Kuomintang principles, he remained steadfastly opposed to Soviet influence.

During July, Yen moved eastwards into Chihli and occupied the important railway junction of Chentingfu on the Peking-Hankow railway. Chang endeavoured without success to bring him into the Northern fold with the object of making a combined attack on Feng Yu-Hsiang. At the end of September, Chang reinforced his garrison at Kalgan by two brigades. At the same time he also held up at Tientsin a consignment of arms destined for Yen. These measures were construed by Yen as hostile acts and he advanced from Shansi towards Kalgan early in October.

Subsequent information has made it clear that Soviet intrigues were responsible for the Shansi attack on Chang. It was hoped that Yen's attack would be successful but would leave him so weak that Feng would be able to advance on Peking without opposition. As Feng relies entirely on Russian support, the Soviet would ultimately profit by his arrival in Peking.

Unfortunately for the Russian plan, Chang was strong enough not only to withstand the Shansi attack, but to force Yen to withdraw in confusion back to his own province. On the Kalgan front, Chang at once ordered the forward troops to withdraw to the naturally strong position of the Nankow Pass, 30 miles north-west of Peking. Reinforcements from Manchuria were sent up to envelop the Shansi forces on either flanks.

On the Peking-Hankow railway front, Chang sent his son to Paotingfu, with orders to clear the railway and to compel the Shansi forces to withdraw from Chihli province.

These measures were successful, and by 15th October the Shansi forces had been heavily defeated on both fronts, and were in full retreat. Two Shansi raiding parties, one of which got within 18 miles of Peking, after holding out for a few days, were rounded up by Northern troops.

Thus Yen's attack proved a disastrous failure. At the end of the month fighting near the Shansi border south-west of Kalgan was still in progress, but discussions for peace terms were already in progress. It is still doubtful whether or not Yen will be able to remain in control of his province; Chang appears agreeable to allowing him to remain, provided he gives guarantees against a future sudden attack; it is,

however, possible that the province will be divided up amongst Yen's subordinates.

At the same time that Chang Tso-Lin's forces were driving back the Shansi armies, the Shantung troops of Chang Tsung-Chang commenced a movement westwards along the Lunghai railway against Feng Yu-Hsiang. Early in October, Feng had moved eastwards along this railway with the object of making an attack against Chang Tsung-Chang, simultaneously with a fresh Nationalist advance northwards along the Pukow-Tientsin railway. The latter failed to materialize and Feng then withdrew without fighting to Kaifeng. At the end of the month Feng was being attacked by 6 Shantung formations and was slowly withdrawing from Honan.

On the Pukow-Tientsin railway front no fighting occurred between the Northerners, under Sun Chuan Fang, and the Nanking Nationalists. The latter moved a considerable number of troops over to the left bank of the Yangtze preparatory to undertaking a fresh offensive, but for various reasons this offensive was not launched.

Thus the end of October sees Chang Tso-Lin even more firmly established in his position at Peking as Generalissimo of the Northern allies.

In Kwangtung there has been no further fighting this month. For the time being Chang Fak Wei, who arrived at Canton with a large army during September, appears to have settled down with Li Chai-Sum still in nominal control. Expectations that the latter would be turned out by Chang have not yet been fulfilled. There is, however, a recrudescence of Soviet activities in Kwantung province. Chang Fak Wei was accompanied by a number of Russians, and many others have since arrived in Canton. An account from the Russian point of view of the amazing success they had in the years 1924-26 in organizing an efficient Cantonese army will be found on page 210. There is no doubt that a new attempt is about to be made by the Russians in this area towards organizing a fresh revolutionary Chinese army. This time the attempt is not being made to utilize existing forces as in the previous case, but the Russian efforts are being expended towards forming completely new armies from the Chinese peasant masses. The Russians anticipate that from two to four years will be required to form this new revolutionary army. As before, Kwangtung is to be the main centre and base of Russian activity in

South China. Fresh anti-foreign agitation must, therefore, be expected in this area in the near future.

2. *The Nationalist Split.*

Advantage was taken of the lull in the hostilities between north and south which occurred during October to undertake further attempts to bring about a reunion of the Nanking and Hankow nationalists into a homogeneous party. It will be remembered that during September a conference was held at Nanking for this purpose, but, owing to the absence of the Hankow leaders, this conference was a failure.

During October another conference was held at Hankow. Certain decisions were announced, including the reunion of the party, a combined attack on the north, and an invitation to Tang Sheng-Chih, the Hankow leader, to become commander-in-chief of the reunited forces. This conference, however, had no more real success than the former one. Immediately after its conclusion, Tang Sheng-Chih openly announced his independence of Nanking and the formation of a new government with himself at its head.

Thereupon the Nanking Government declared war on Hankow and commenced preparations to this end. Troops which had been taken across the Yangtze preparatory to a fresh advance northwards, were retransferred to the right bank; Cheng Chien, the Chinese general responsible for the Nanking outrages, was appointed chairman of the Nanking Government Military Council; and an expedition moving up-stream on both banks of the Yangtze was launched against Hankow. On the right bank Cheng Chien was personally in command with three armies which, after taking Wuhu, moved up-stream towards Anking. On the left bank, a smaller force attacked and captured Anking.

By the end of the month the advance on both banks had progressed beyond Anking towards Kiukiang, whilst the Hankow forces were preparing to stand at Wusueh, 25 miles above Kiukiang.

Gun-boats were also employed by Nanking on the river to assist the expedition, whilst Tang is reported to have mined the river above Wuhu.

Before the end of the month a fresh element was introduced into this, hitherto, domestic nationalist quarrel. That was the report that Tang Sheng-Chih had transferred his allegiance to the northerners. Negotiations to this end are now reported to be in progress

between Tang and Chang Tso-Lin. The quarrel between Nanking and Hankow has thus become merged into the older civil war between northerners and southerners.

6. *Reduction of British troops in the Far East.*

The reduction of the Shanghai Defence Force was continued when the 1st Bn. Camerons, sailed for home on 15th October.

The Civil War.

The month of October closed with the defeated forces of Yen Hsi Shan being pressed back into Shansi province by the Northern troops of Chang Tso-Lin. During November, Chang continued to exert pressure on Yen, who was forced to yield ground on both northern and eastern borders of Shansi. In the north, Chang was able to occupy successively the important town of Tatung and the railway as far as Suiyuan. Thus Chang is now in control of the whole of the Peking-Kalgan-Tatung-Suiyuan railway, and Yen is deprived of the northern portion of his province. Further south, the Peking-Hankow railway was cleared of Shansi troops, who withdrew, after sustaining considerable losses, to the passes west of Chentingfu leading into Shansi. By the end of November, northern forces had pressed the Shansi armies back to the border, and had succeeded in forcing a way across two of the passes, and were continuing to move further into Shansi.

There has been no further report of peace discussions between Chang and Yen during the month; while up to the present time Yen has not been forced to relinquish his hold on the remainder of his provinces.

During the month the situation on the Lunghai railway has fluctuated. Following the attack, by Chang Tsung-Chang on Feng at the end of October, there was a short lull in the fighting on this front. Feng then counter-attacked eastwards, captured Kweiteh (80 miles east of Kaifeng) and threatened Suchow, the junction of the Lunghai and Tientsin-Pukow railways. The Shantung troops of Chang Tsung-Chang were, however, able to bring Feng's attack to a standstill and recaptured Kweiteh, and at the end of November were reported to be in Kaifeng.

On the Pukow-Tientsin railway front, Sun Chuan-Fang withdrew without fighting for some 60 miles. This was followed by a corresponding advance on the part of the Nationalists. Elsewhere there has been no fighting during the month.

The Nationalist Split.

By the end of October, the Nanking expedition, against Hankow had advanced to within a short distance of Kiukiang, moving up-stream on both banks of the Yangtze. The movement continued during November and Hankow was entered by the forces of Nanking under Cheng Chien on 16th November. Tang-Sheng-Chih, the Hankow Commander, fled from the city on 12th November, taking passage for Japan on a Japanese steamer. The command of the remnants of his forces devolved on Ho Chien, one of the army commanders. By the end of the month Ho Chien's troops were still withdrawing up-stream, and were scattered over the Yochow-Changsha area and in western Hunan, pursued by certain Nanking forces.

On 27th November, dissension occurred amongst the Nanking generals in Hankow. The quarrel arose over the appointments to various lucrative posts, each general wishing to secure these for his own nominees. As a result, Cheng Chien resigned and was succeeded by Li Chung Jen. The quarrel also led to the abandonment for the time being of the pursuit of Ho Chien's forces.

Above Hankow, Yangsen moved down-stream some 50 miles, peacefully absorbing one of the Hankow armies on his way. Up to the end of the month he had made no further attempt to attack or co-operate with the Nanking forces occupying Hankow, but is reported to have a detachment buying supplies in Hankow.

It will be remembered that conferences for the purpose of reuniting the various Nationalist factions were held at Nanking in September and at Hankow in October, neither of which succeeded in its object. Yet another attempt was made during November to reunite the rival groups of the Nationalist party. A conference was called to meet in Shanghai for this purpose towards the end of November. By this time, Chiang Kai-Shek, who fled to Japan in August, had returned to Shanghai, and was believed to be prepared to join up with the Nanking régime again. There was also a new Nationalist régime in Canton under Wang Ching Wei, an old revolutionary and friend of Chiang Kai-Shek. Thus the conference was to include representatives of the three existing Nationalist factions in South China—Nanking, Shanghai, and Canton. (Hankow had by this time ceased to count seriously).

The Canton representatives reached Shanghai on the 18th November. On the 24th November, however, apparently mutual jealousies once again intervened, and it was announced that the conference had been postponed indefinitely. Thus there is still no central Nationalist Government in South China, but three mutually suspicious régimes.

SITUATION AT VARIOUS CENTRES.

Shanghai.

Communist activities have increased during the month, and there have been many strikes, some of which are still in progress.

On 7th November, the tenth anniversary of the Soviet coup in Russia, a "White" Russian mob attacked the Soviet Consulate. The mob was received with revolver fire which caused some casualties. The Municipal police soon quelled the disturbance.

Hankow.

Shortly before Hankow fell, Cheng Chien who was commanding that portion of the Nanking expedition on the right bank of the river, was appointed to command the whole expedition. It will be remembered that Cheng Chien was responsible for the Nanking outrages of April, 1927. Considerable apprehension was, therefore, felt in Hankow by Chinese and foreigners alike, prior to the arrival of this notoriety.

As a precautionary measure the Japanese and French both landed additional armed forces to guard their Concessions. No British forces were landed in the ex-British Concession. With the exception of a few cases of looting by the retreating Hankow forces, however, up to the end of the month the city has been quiet and orderly under Cheng Chien's control.

By agreement amongst the Powers, all dealings with Cheng Chien have been avoided, in order to prevent any idea that the responsibility for the Nanking outrages has been forgotten or condoned.

The resignation of Cheng Chien has given rise to further anxiety in the city.

The administration of the ex-British Concession continues to cause difficulties. The new Chinese Director of the ex-British Concession has not yet been recognized, as his appointment was made contrary to the terms of the agreement under which we handed back the Concession to the Chinese.

Owing to sniping by the Chinese on British ships above Hankow it was found necessary to arrange convoys between Hankow and Yochow. Trade, however, continues to remain difficult and stagnant.

Canton.

On 4th November, a fresh anti-British boycott broke out at Canton. There were a number of uniformed pickets ashore, but none were operating on the river. Orders were given that naval action should be taken against any pickets that started to work afloat. Energetic protests were made and by 18th November it was reported that the situation was again normal.

Chinkiang.

On 4th November, two British employees of the Asiatic Petroleum Company were assaulted by Chinese soldiers while visiting the Company's premises at Chinkiang. A Chinese officer intervened in time to prevent serious damage. The local Commissioner for Foreign Affairs was ordered to apologize. He did so in person on board one of His Majesty's ships on 15th November and the incident was closed.

Nanking.

During the month, the company of Marines which had been guarding the International Export Company's premises at Nanking since August, 1927, was relieved by a company of the 1st Bn. Bedfordshire and Hertfordshire Regiment.

Fukien Province.

For some months the province of Fukein has been quiet. The Government was reorganized on moderate Nationalist lines during July, under the chairmanship of Admiral Yang Shu-Chuang. The province has remained under the control of the provincial Navy. The Navy is determined to maintain control, for which purpose the local naval officers are organized in two groups. These are the pro-Nationalist group under Admiral Yang, and the pro-Northern group under an Admiral Sah. In the interests of the Fukien Navy either group is prepared to take over from the other in a friendly way, according to the political developments on the Yangtze.

Yunnan.

The province of Yunnan continued to be in an unsettled state during the month, but no important British interests are involved in the purely local fighting.

Reduction of British Troops in the Far East.

The reduction of the Shanghai Defence Force was continued when the 13th Brigade Headquarters, 1st Bn. Border Regiment and 1st Bn. Middlesex Regiment sailed for home on 18th November. The 1st Bn. Northamptonshire Regiment and 56th Field Company, Royal Engineers, were moved from Hong Kong to Shanghai during the month.

China's Trade.

A table showing the division of China's foreign trade between the British and Japanese Empires and the United States of America during the years 1924 to 1926 is given below.

The following deductions can be made from the table :—

- (1) That whereas up to and including the year 1925 the total trade of the British Empire with China was greater than that of any other country, in 1926 our trade was surpassed by that of Japan.
- (2) That since 1924 the value of British trade with China (particularly as regards our exports to China) has consistently fallen, whilst that of Japan has been rising.
- (3) Although the value of the total trade of United States of America with China fell in 1925 and was no greater in 1926 than in 1924, yet the percentage of China's total which goes to the United States of America has risen consistently.

Table showing the direction of China's foreign trade.

—	1924.		1925.		1926.							
	Percentage of Chinese total.	Imports to China from	Total trade.		Imports to China from	Exports from China to						
			Value £ million.	Percentage of China's total.								
China's net imports.		Exports from China to	33	129	38½	35	26	93½	31	23	85	27½
China's exports ..		Imports to China from	30	87	26½	32	28½	92	30½	30	93	30
China's total trade.		Percentage of Chinese total.	18½	51	16½	15	19	51	17	18	54	17½

* Includes Japan, Formosa and Korea.

† Includes U. S. A., Hawaii and Philippines.

*The Situation.**1. Civil War.*

At the end of November the civil war situation was more or less stabilized on all fronts. These conditions obtained throughout December with minor exceptions. In the north there has been no fighting between Chang Tso-Lin and Yen Hsi-Shan, and Chang remains in control of the northern part of Shansi which he captured during November.

The Northerners have lost some ground on the Tientsin-Pukow railway. The fluctuating fighting east of Kaifeng on the Lunghai railway, which started during November, continued during December, and on 23rd December it was reported that Feng had succeeded in capturing Suchow, the junction of the Lunghai and Tientsin-Pukow railways. Reports were also received that the Nanking Nationalists were approaching this town, and there is no doubt that the Northerners have lost it, though the Nanking Nationalists have not yet joined hands with Feng owing to the serious damage done to the Tientsin-Pukow railway. Further east, the Northerners have also evacuated Haichow where the Lunghai railway reaches the sea.

Any further joint advance northwards by Feng and the Nationalists is unlikely for some months as, apart from mutual distrust, severe winter conditions are now prevailing, and a shortage of ammunition is reported.

In addition to these reasons, there have been signs during the month that the chief weapon used by all Chinese leaders in their civil wars—namely, cash—is becoming increasingly scarce. Each successive leader has endeavoured to squeeze the utmost amount of money out of the inhabitants of such areas as he happens to control, with the result that it is now becoming increasingly difficult to extract enough to pay for the barest necessities of an army.

For the time being, therefore, a quiet period as regards civil wars is not unlikely.

2. The Nationalist Split.

It was reported in the November issue of this summary that Cheng Chien, the Nanking general who was in command at Hankow, had resigned. His resignation does not appear to have been accepted, for he remains in control at Hankow. He appears to have come to some form of agreement with Ho Chien, who took command of the

remnants of the Hankow forces, after the flight of Tang Sheng Chih in November. These remnants have not been pursued by Cheng Chien farther than Yochow.

The Kuomintang conference for reunification of the party, which was postponed in November, was held during December in Shanghai. Delegates of the Nanking group, local Shanghai representatives, and Wang Ching Wei and Li Chai-Sum from Canton attended. From the first wide differences of opinion were evident, but eventually the moderate elements, realizing the critical state of the party, were able to arrive at certain decisions. The result was favourable to the Nanking group, whose leader, Chiang Kai-Shek, was once again appointed Chairman of the Military Council, and to all intents Generalissimo of the Nationalist forces. Orders for the arrest of Wang Ching Wei, the extremist from Canton, were given, but he appears to have made good his escape before they could be carried out. He is reported to have sailed for France on a French ship on 17th December, but this report lacks confirmation.

As a result of this conference, the local regimes at Hankow and Canton appear for the time being to be acting in agreement with, if not under the orders of the Nanking group. It has been arranged to hold a plenary party conference at Nanking between 1st and 15th January, 1928.

3. The Expulsion of the Russians from Nationalist China.

During the early part of the month it was clear that the danger of very serious troubles through Communist activities existed in the three cities of Shanghai, Canton and Hankow. On 17th December, immediately after the conclusion of the Shanghai Conference (and probably as one of the conditions under which Chiang Kai-Shek resumed office) a decree was published simultaneously by the local governmental regimes in Shanghai, Canton and Hankow. This decree gave orders that all the Russian consuls and their staffs in these towns should be expelled from China forthwith. The prompt execution of these orders is a measure both of the unity which was reached at the Shanghai party Conference and of the fact that the moderate elements at the Conference prevailed over the extremists.

By the end of the year all the Russian officials, accompanied by the majority of other Soviet personnel, had sailed for Vladivostok.

The action against the Russians was followed by drastic steps against Chinese Communists and all those in any way suspected of being in sympathy with the Communists. In Hankow and Canton Chinese "reds" were massacred wholesale, whilst a number of Russians were arrested and summarily executed. These Russians even included a few Soviet officials. These measures were taken, apparently, in revenge for the iniquities committed by the Communists whilst they were in power. This sudden break of relations and dismissal of the Russian officials and "advisers" from south China must be regarded as one of the most important events in Chinese history since Sun Yat Sen accepted Soviet aid in Canton in 1923. Feng now remains the only Chinese leader who openly countenances Russian advisers and accepts Russian help, but this is natural since, owing to the poverty of the area he controls, Russian supplies are vital to him.

In the north, Chang Tso-Lin has refrained from further violent measures against unofficial Russians. (It will be remembered that he broke off official relations following the raid on the Soviet Embassy in Peking in April, 1927). He is anxious to give no cause to Russia and Japan to come together in Manchuria, where Chang's difficulties with both do not tend to grow simpler.

4. *Situation in various centres.*

Shanghai.

For the past month Shanghai has been suffering from a wave of crime of violence and intimidation. Many strikes have been and are still in progress, mainly the result of Communist agitation.

Owing to intimidation and actual violence there has been a strike of tramwaymen during most of the month. A restricted service was put into operation under the protection of armed guards stationed on each tram. By the end of the month a normal service was resumed.

The state of nervousness in the Settlement was so acute, that the Municipal Council requested the British and Japanese commanders to institute a system of armed patrols in the streets, in order to restore confidence.

Canton.

It will be remembered that a *coup d'état* was carried out by Chang Fak-Wei in Canton in November, on the day after Wang Ching-Wei and Li Chai-Sum departed for Shanghai. Chang was accompanied by many Russians, and hundreds of Chinese Communists

were released from the prisons. On 12th December a Communist rising was staged under instructions from Moscow. A Soviet form of Government was set up, and a reign of terror began, accompanied by looting, murder, and incendiarism. By the 15th December, however, the moderate element, represented by Li Chai Sum's forces, succeeded in regaining control of the city. Literally hundreds of Communists were executed including several Russians.

These troops only held the city for a few days, after which, in the absence of Li Chai-Sum in Shanghai, control of the city was obtained by Li Fuk-Lum. Li Chai-Sum's troops remained in the vicinity, and on 29th December again seized the city without fighting. Meanwhile Li Chai-Sum had arrived at Hong-Kong *en route* for Canton, and Li Fuk-Lum immediately went off to welcome him there. In view of Li Fuk-Lum's treacherous conduct during Li Chai-Sum's absence, his reception by Li Chai-Sum is doubtful. By the end of the month better conditions prevailed in Canton, where throughout the trouble no anti-British violence was reported.

Further east in Kwantung, Communist outrages continue, many executions taking place daily. Chang Fak-Wei withdrew with his extremist troops north-eastwards and is reported to be making for Fukien.

Hankow.

Throughout the month there was much anxiety owing to Communist agitation and a spasmodic outbreaks of disorder. The Government of Cheng Chien was accompanied by many Russians and a serious rising had been planned to take place on the 1st January. The danger of this was greatly reduced after the dismissal of the Soviet officials.

The Upper Yangtze.

Throughout the month a chaotic state of affairs was in force on the Upper Yangtze. For hundreds of miles no constituted authority was in control and bands of pirates and bandits infested the area. On 30th November the British s.s. "Siangtan" was attacked by an armed band near Ichang and some of the crew were killed. Captain Lalor, in command of the ship, was carried off as a prisoner and held to ransom. With difficulty communication was established with the bandits through the voluntary assistance of a Scotch missionary Mr. Tocher. With great determination and courage Mr. Tocher paid,

several visits to rendezvous appointed by the pirates and, after considerable delays for bargaining, he succeeded in effecting Captain Lalor's release for the sum of 60,000 dollars (about £ 6,000) on 13th December. Captain Lalor had been kept on board a sampan under conditions of great hardship, rendered worse by the fact that, in trying to attract the attention of passing ships, he had accidentally wounded himself in the leg.

Tibet.

The presence in Lhasa of a party of Mongolians has been reported in this Summary since April, 1927. Coming ostensibly for religious purposes, it will be recalled that the party proved later to be a Bolshevik mission. With the exception of two unimportant members, the party left Lhasa northwards on their return to Mongolia on 5th December. The mission was entertained by the Dalai Lama before their departure, though His Holiness was not present at the entertainment in person. The mission does not appear to have achieved anything of importance during its stay in Tibet.

5. Reduction of British Troops in the Far East.

The reduction of the British forces available at Shanghai was continued when the remaining half of the battalion of Royal Marines sailed for home on 6th December.

DENMARK.

Progress of the work of deepening the Drogden Channel Entrance to the Baltic.

(1) The Drogden Channel forms the easternmost but one of the four entrances to the Baltic Sea. It lies to the west of the Island of Saltholm (between Malmo and Copenhagen), to the east of which is the Flint Channel. The other entrances are the Great Belt and Little Belt.

Before the deepening of the Drogden was commenced, the depth of water (at L. W. O. S.) available in the four channels was as follows :—

				Feet.
Flint	..	..	..	23½
Drogden	..	..	..	23½
Great Belt	..	..	..	33
Little „	..	..	..	36

It was originally proposed to deepen the Drogden to about 30 feet, but owing to the difficult nature of the bottom it has now been decided to increase the depth to 27 feet only.

The Little Belt may shortly be closed to large ships owing to a proposal to build a new road and railway bridge connecting Funen with the mainland.

(2) The work, which has been in progress for about $3\frac{1}{2}$ years, is being carried out partly by the State and partly by private contractors. As much as 8,000 tons of rock have been removed from the bottom, and pieces as heavy as 20 tons each have been blasted and dredged.

The length of the completed channel will be $6\frac{1}{2}$ kms., and the width about 250 metres.

It is hoped, weather and other conditions permitting, to complete the work by the end of this (1927) year.

ESTONIA.

Army Manœuvres, 1927.

1. Estonian manœuvres were held this year in the Petchori-Woru area (south of L. Pskov, near the Russian frontier).

They took the form of a series of exercises for commanders and headquarters of formations and units, and for the Intercommunication Service; formations and units themselves were represented by cadres only.

2. The ground in this area is of an open hilly nature, dotted with small coverts and detached farms. The inhabitants of the Petchori district are quite distinct from those of the Woru, and are, to all intents and purposes, Russians of a low, savage and almost criminal type. The principle tactical features of the area are:—

- (a) The River Piussa, a deep and, in places, swift river, which forms a very distinct obstacle to an invader from the east.
- (b) The Koteleva ridge, a bare outstanding feature astride the main Petchori-Woru road, about 5 kilometres west of the former, which commands the country to the east and which, if resolutely defended, would require a "set-piece" attack for its capture.

3. The first phase of the exercises, which extended from the 4th until the 8th September, dealt with the problems confronting commanders, staffs and intercommunication troops in a delaying

operation at the conclusion of which a counter-offensive is launched. The second phase dealt with the problems of a purely defensive battle.

"Kaitselit" or Estonian Civil Guard.

Origin and organization of the "Kaitselit."

1. The "Kaitselit," or Civil Guard, was founded originally in 1920. For the first 3 years of its existence, however, the movement made little progress, and it was not until 1924 that the Communist rising, which took place in Reval in December of that year, gave it a fresh impulse. Prior to this date the total strength of the "Kaitselit" was approximately 2,000. The collection of the necessary funds to enable a larger organization to be built up were the first steps in the work of re-organization. For this purpose a tax was levied on every citizen in Estonia, according to the scale of his income, and a sum of E. marks 200,000,000 was raised.

The aim of this organization is to include within its ranks the whole of the non-mobilizable manhood of the country, and its rôle to maintain internal order and to suppress Bolshevism. Service was to be compulsory for all males immediately before their conscript service and immediately after their period in the army reserve, when they were to receive some simple military training.

At present this organization has a total strength of 30,000, is under the general supervision of the Ministry of War, has its own chief who holds an independent command, and although he attends army conferences and as far as possible co-operates with the Chief of the General Staff on matters affecting mobilization, &c., cannot be dictated to by the General Staff of the Army.

Method and terms of enlistment.

2. Enrolment is on a voluntary basis, and can take place from the age of 17, each volunteer having to be vouched for by three existing members of the "Kaitselit." To encourage recruiting, service in the "Kaitselit" carries with it a reduction of the period of service in the army. This reduction of the term of conscript service varies in accordance with the efficiency shown while in the "Kaitselit," and is assessed by means of an examination which is held during the summer while training in camp. Individuals who pass out first-class from this examination are exempted 4 months conscript service; those

who pass out second class, 2 months, and those who fail undergo the full term.

There are no fixed terms of service : individuals remain or resign as they wish.

3. *Command and Instructional personnel.*

There are three categories of command and instructional personnel :—

Category 1.—Officers seconded from the army, of whom there are only 50, and who form the Headquarters Staff, at Reval and other important centres. They receive pay according to their rank in the army.

Category 2.—Officers from the reserve, on the retired list, nominated by the Minister of War for active service with the “Kaitselit.” They number 325 and, although unpaid, are given free travelling facilities and a small pension according to length of service.

Category 3.—Those who are selected as voluntary members.

4. *Rank.*

Rank as such does not exist. Appointment takes the form of rank, and the commanders of regiments and battalions each wear a distinguishing mark to denote their appointment.

5. *The composition of the “Kaitselit.”*

Infantry forms the main part of this organization, but there are also a few artillery, cavalry and machine gun units and armoured cars.

The regiment is the highest infantry organization and is complete with battalions, companies and sections. 15 regiments exist having a strength varying from 1,500 to 3,000 men. Battalions and companies vary in strength from 600 to 700 men and 200 to 300 men respectively.

There exists, also, an affiliated women’s organization, known as “Kodu Katzi Uhing,” with a strength of 9,000. Its main duty is in connection with supply and medical work for the troops in the field.

7. *Training.*

Training is carried out three times a year—in the autumn, winter and summer. In the autumn tactical training takes place. In winter individual training, war games, battalion courses and lectures,

given by what is known as a "Flying School" organized by the Headquarters Staff, which goes from one area to another. In summer, field training in camps for a period varying from a fortnight to three weeks, often carried out in conjunction with the regular army, while officers of the "Kaitselit" are attached to units of the army during important field exercises.

There is a large camp at Verska on the shores of Lake Pskof, where newly enrolled volunteers and others are passed through every summer (in the summer of 1927, 20,000 men).

FRANCE.

Reorganization of the frontier defences.

(a) The institution of a Commission d'organization for the fortified regions.

A Decree of 30th September, 1927, constitutes a Commission charged with reporting to the Minister of War on all questions dealing with the type, the resistance and the armament of the defensive organizations, which are to be created on the north-east frontier.

This Commission is to replace the former Commission, which was engaged on studying the question of frontier defence; to ensure continuity, members of the new Commission and its secretariat will be chosen from amongst those working on the former Commission.

The new Commission is composed as follows:—

The Inspector-General of Engineers as President.

Two general officers, one from the infantry and one from the Metropolitan Artillery, who are to have no other command or appointment.

One of the Sub-Chiefs of the General Staff of the Army.

The Commission will be assisted by a secretariat under the direction of the artillery general, who is a member of the Commission. He will have under him a senior infantry, artillery and engineer officer and an *officer d'administration du service d'etat major*. Specialist officers may be attached to the secretariat as required.

It will be remembered that the draft Budget for 1928 allots 54,300,000 francs for the reorganization of the eastern defences.

(b) Reconstitution of the Technical Engineer Committee.

A Decree of the 30th September, 1927, alters the composition of the Technical Engineer Committee, in order to effect closer liaison between this committee and the new *Commission d'organization* for the fortified regions.

The Technical Engineer Committee will be composed as follows :—

Seven Engineer-Generals, namely :—

The Inspector-General of Engineers.

The General Officer Commanding, Signal Troops and Services.

The General Officer Commanding, Transportation Troops and Services.

The Technical Inspector of Engineer Works.

The Permanent Inspector of Engineer Material.

The Technical Inspector of Fortification Works.

The Assistant to the Inspector General of Engineers.

Two Infantry Generals, one of whom is a member of the *Commission d'organization* of the fortified regions.

One General of Metropolitan Artillery, who is a member of the same Commission.

One General of Colonial Artillery.

The increase in the number of Engineer Generals is due to the appointment of the following officers to the Committee :—

The Technical Inspector of Fortification Works, whose appointment was sanctioned by a Ministerial Decree of the 9th April, 1927.

The General Officer Commanding, Signal Troops and Services (owing to the importance of signal communications in relation to permanent fortifications).

Proposed Re-introduction of pre-war Uniforms to Stimulate Recruiting.

The French military authorities are considering the reintroduction of the pre-war parade uniform. Authority has already been given for officers of Spahis, Chasseurs d'Afrique and Zouaves to wear the old uniform ; all non-commissioned officers and regular soldiers of these regiments are also to be issued with the old uniform, as far as existing stocks allow, for use on leave or when walking out.

It is understood that the proposal has been put forward by the recently appointed Inspector General of Long Service personnel, in order to stimulate the recruiting of regular personnel. The proposal is of interest, in view of the difficulty of obtaining the extra regular personnel required under the re-organization proposals.

Communist Activity in the French Army.

In continuation of Military Intelligence Summary, Volume II, No. 3, July, 1927, page 91 and No. 4, August, 1927, page 129.

Heavy sentences have been recently inflicted for anti-militarist propaganda.

Amongst others, M. Duclos, Deputy for the Seine Department and Manager of "La Caserne," was sentenced to 30 years' imprisonment and a fine of 18,000 francs for publishing articles inciting soldiers to mutiny. M. Marty, another Deputy, was sentenced to 10 years' imprisonment and a fine of 6,000 francs. Four other journalists were sentenced to 3 years' imprisonment and fines of 2,000 francs. M. Bellenger and M. Michelet, the latter of "l'Aube Sociale," receive similar sentences in default.

An action was brought against the Limoges Communist paper "Le Travailleur du Centre," charging it with publishing defamatory articles against the garrison.

Early in October, the French Police seized 43,000 copies of "Le Conserit," which had been made up into packets for issue to men of the annual class, due to join the colours this autumn. The manager of the paper has been arrested and charged with inciting to disobedience.

NOTES ON MILITARY REVIEWS.

"REVUE MILITAIRE FRANCAISE."

October, 1927.

(Published by Berger-Levrault. Price 5.50 francs.)

1. *Douaumont during the German Occupation (II)*. (To be continued.) (One sketch map.) By General Rouquerol. Of interest.

Mainly deals with the situation of the German garrison told off to hold the fort when their offensive, for strategical reasons, ceased on 2nd September. The description of the state of the fort, and the steps taken to reorganize it are interesting.

The attacks carried out prior to that date, viz., in May by the 5th Brandenburg and subsequently by the 2nd Bavarian Divisions, are also interesting from the trench warfare point of view.

2. *The Qualities of a Commander. Part I.* By Colonel Lucas. Of interest.

A psychological study of the qualifications essential to a successful commander. The scope of his duties are summarized as "to formulate a plan, to direct, and to administer." The writer considers these qualities from the standpoint of the higher and the subordinate commander in turn.

Some examples are given of the views of certain world-famous generals on the essential attributes of a leader. Marshal Saxe, for instance, says valour, intelligence, and spirit, health and a well-ordered "douceur." The latter evidently appeals to the author who classifies it as "une qualite bien Francaise." Napoleon's mention of Davout was "This Marshal has shown great bravery and force of character, the first essential qualities of a leader."

3. *Horse and Motor.* By Commandant Janssen. Of interest.

This excellent paper gives many useful figures concerning the movements by rail and automobile of a French division, and the availability of lorries, vans and small tractors on mobilization. The author, though apparently an ardent adherent of rapid mechanization eventually comes to the conclusion that mechanization must be gradual, and start with rearward echelons, reserve formations and supply columns. He goes at some length into the possibilities of mechanizing certain combat transport. This article is well worth reading.

4. *The Serbian Victories in 1914. Part II.* (Continued.) By Commandants Desmazes and Nacumovitch. Of interest.

Discusses the preliminary movements of the Serbians and Austrians from the crossing of the River Drina to 15th August, 1914. Though mostly purely narrative, attention is directed to the dilatory methods of the Austrians after crossing the river, and to the separation of their artillery and infantry in the attack on the Tser plateau by the 21st Division. A concise but clear description is also given of the initial Serbian movements.

5. *Repression of Military Crime in the Roman Armies.* By Capitaine Andrieux. Of historical interest only.

A good account is included of the system of decimation.

Army Reorganization. (Reference, M. I. S., Vol. 10, No. 4, February, 1927, page 148).

(a) *Disbandment of Infantry Divisions.*

Notices in the "Journal Officiel" show that the headquarters of the following divisions have been disbanded as part of the reorganization scheme :—

28th Division	..	..	..	Lyon.
30th	„	..	..	Toulon.
31st	„	..	..	Montpellier.
35th	„	..	..	Bordeaux.

(b) *Formation of an Expeditionary Force in France.* ("Force Disponibles.")

The Colonial Expeditionary Force stationed in France in peace is to consist of 5 Divisions :—

2 North African Divisions.

2 Sengalese Divisions.

1 Indo-Chinese Malgache Grnpement (equivalent to a Division).

Notices in the "Journal Officiel" show that the following are in process of formation :—

1st North African Division	..	Lyon.
„, Sengalese Colonial Division	..	Bordeaux.
2nd Sengalese Colonial Division	..	Toulon.

The Sengalese Divisions will each have two Infantry Brigades, each of two regiments, making a total of 12 instead of the normal 9 battalions to a Division.

(c) *Other Colonial units stationed in France.*

There is to be one White Colonial Division in France, in addition to the 20 White Metropolitan Divisions. This division will probably act as a depot for White French Colonial units overseas.

(d) *Disbandment of Units.*

Ten French machine gun battalions, a disciplinary *Battalion d'Afrique* and a North African Infantry Regiment were disbanded during October.

(e) *Composition of Divisions on the Italian frontier.*

Divisions on the Italian frontier are being raised to an establishment of two infantry brigades (12 battalions) in place of the normal 9 battalion organization.

The 29th Division at Nice has had the higher establishment for about a year ; the 27th Division at Grenoble is now being strengthened.

The 2nd Sengalese Colonial Division at Toulon is also on the higher establishment (*see (b) above*).

Military Training (Games).

Last August, a War Ministry decree forbade serving soldiers to take part in games and athletics organized by civilian associations ; this caused some alarm as it was taken as a proof of the hostility of the military authorities to games.

A new circular has now been issued, taking the first step in making games a part of the regular training of the French soldier. Especial emphasis is laid on football and cross-country running, owing to their value for military training. Three military championships are to be created in France ; for association football, Rugby football, and cross-country running. Every regiment or other self-contained unit will take part in these sports and the formation of teams will be compulsory. The army corps will be the unit of competition ; eliminating matches will be held to decide which team shall represent the army corps, and the championship matches will be between the army corps teams. Finally, the winners of the army championships may meet those of the civilian championships, and facilities will be given for the training of army teams for international matches.

It may be added that since the recent visit of a party of Saint-Cyr cadets to Sandhurst, the officers of Saint-Cyr have been ordered for the first time to take part in games with the cadets.

Illiteracy in the French Army.

In a report on the Budget of the Ministry of War, stress is laid on the considerable increase of illiteracy amongst French recruits since the war ; there is an increase in one region from 3·5 per cent. in 1912 to 11 per cent. in 1927. The question is serious, as with the short period of service, the whole of the soldier's time must be devoted to military training.

Communist Activity in the French Navy.

During the discussions on the French Naval Budget, the Communists and Socialists demanded to send a Parliamentary Commission of Inquiry to Toulon, to enquire into the recent mutiny in the

"*Ernest Renan*" and at the naval prison. The Minister of Marine replied that the Communists merely desired to destroy discipline in the Navy, by means of the Parliamentary Commission. The proposal was defeated in the Chamber by 371 votes to 150.

ARMY REORGANIZATION.

(a) *The Budget for 1928 (discussion in the Chamber of Deputies).*

This is the first budget to be presented in view of the reorganization of the army, that is to say, of a smaller peace army performing a shorter active service and consisting of 20 active peace divisions with necessary ancillary troops, and of an essential but small expeditionary force together with local garrisons for policing France's very large overseas dominions.

Such a change of organization is impossible without considerable expenditure on the provision of stronger cadres, improvement of accommodation, a more adequate training of reserves, and of a general shuffle round of existing forces. All these things cost money.

The discussion on the military budget began in the Chamber of Deputies on 2nd December and finished on 5th December, all the articles of the Government's project being adopted by 325 votes to 194. M. Bouilloux Lafont, the rapporteur who opened the debate, explained the causes for the augmentation in the credits asked for; these may be summed up as follows:—

50 per cent. directly or indirectly due to the reorganization scheme;

20 per cent. to increased cost of supplies, equipment, forage; and,

30 per cent. to renewal and completion of armaments, fortifications and other services.

The following are the chief points of interest in the debate:—

(i) *Two deputies protested against the yearly convocation of reservists,* their misuse during the training period and the waste of time involved in their assembly and dispersal. Discussion of this point brought out a good deal of detailed information on the subject of disciplinary troubles which arose during the 1927 training season, which clearly showed that these outbreaks were engineered and led by communists or their tools. In reply, the Minister for War stated that the annual training of reservists is an integral and necessary feature of the new army organization and cannot possibly be dropped. He attributed

the disciplinary troubles experienced partly to communist agitation, and those of an administrative or training nature to the experiment of training reservists in complete units, without sufficient active cadre for supervision and assistance. Steps are being taken to remedy these defects and to reduce the total of the early periods to 21 instead of 25 days, the men going direct from their civil employment to the camps, without passing through any intermediate depots for equipment.

(ii) *A protest against credits for the troops in Morocco and Syria* ; in the former case based upon the ransom for M. Steeg's nephew and the threats of a punitive expedition against the tribes concerned ; in the latter case on the dilatoriness of the French Government in finding a *modus vivendi* in that country as compared to the British in Palestine.

(iii) *A protest against retaining 311 generals on the active list*, in view of the fact that the future army on mobilization will evidently consist of some 66 infantry divisions only, which according to the views of those objecting could be staffed with a considerably less number. The debate elicited the fact that all the generals on the active list plus the 800 on the reserve list (except a few considered not sufficiently efficient) will be needed on mobilization of the National Armies.

(iv) *Some interesting, if true, disclosures about French military prisons and protests against the present court-martial organization*. The latter question will shortly be discussed by a Commission.

(v) All the Communist group registered a violent *protest against the Secret Service credits* alleging that these were largely used for spying on the syndicated trades union agents in the army and its services. The Government gained the vote on these credits by a large majority.

See also Monthly Intelligence Summary, Vol. II, No. 3, for July 1927, page 93.

(b) *Notes on Colonial Military Budget for 1928*.

In the draft Colonial Military Budget for 1928 there is an increase asked for of over 77,500,000 francs. This increase is chiefly due to the constitution of new units in Indo-China, to the increase in permanent cadre in connection with the new law of organization of the army, and to the expenditure on the defence of Cape St. Jacques and Saigon (see Monthly Intelligence Summary, Vol. 11, No. 3, for July, 1927, page 94).

The military effectives paid by the Colonial Budget total 51,667 all ranks, as compared to 48,951 in 1927. Besides a small increase in the number of officers, there is an increase of 2,800 in Indo-China, otherwise there is little difference. The proportion of white to native is 1 to 3. The distribution of all ranks territorially is as follows :—

Indo-China	..	..	25,110
West Africa	..	..	17,553
East „	..	..	5,100
Equatorial Africa	..	..	2,987
Antilles ..	..	..	653
Pacific ..	..	..	264

The “Rapport” on this draft Budget gives some interesting information on the subject of a colonial rearmament programme, which apparently is being taken seriously in hand. The following increased approximate demands are shown under the heading of Services of Artillery and Military constructions :—

			Francs.
West Africa	..	..	3,500,000
Indo-China	..	..	2,000,000
East Africa	..	..	1,750,000
Equatorial Africa	..	..	500,000

These appear to be a portion of an 8 years’ programme for the issue up-to-date of light automatics, armoured cars, tanks and 75-mm. Schneider mountain guns, according to the localities where they are most required. The “rapport” goes at some length into the reasons for the large expenditure shown in the Indo-Chinese group. It states that the situation in China, owing to its instability, has necessitated far-reaching reorganization of the local defence system and increased effectives. In 1925-26, 37,000,000 francs were devoted to rearmament of the existing effectives as regards automatic weapons; the creation of an extra battalion, three extra groups of artillery, and of certain ancillary detachments such as aviation, tanks and armoured cars. The total sum thus expended by the metropolitan and colonial budgets combined for 1925-26-27 amount to 180,000,000 francs. The projected 1928 credits envisage the creation of an extra battalion, four companies of native scouts, an extra group of artillery, extra ancillary units and the reorganization of the defence of Saigon and Cape St. Jacques. It is anticipated that these services will call

for an expenditure of 55,000,000 francs, which will presumably entail assistance by the metropolitan budget. If this is granted, it appears that the expenditure in the four years under consideration from 1925-28 will amount to some 235,000,000 francs.

TRAINING OF RESERVE STAFF OFFICERS.

(a) A Decree of 7th December, 1927, published in the *Journal Officiel* deals with the constitution of a reserve of staff officers, and the training of selected officers of the reserve for appointments as staff officers in war.

(b) A reserve of staff officers is to be formed from :—

- (i) P. s. c. officers on the reserve ;
- (ii) Selected officers of the reserve over the age of 30 ;
- (iii) Officers of the reserve who served for not less than six months during the war against Germany in staff appointments.

(c) Commanders of formations are to encourage reserve officers, of at least 28 years of age attending refresher courses (" Cours de perfectionnement "), to apply to be considered for appointment to the reserve of staff officers. Such officers must give a guarantee to remain in the reserve of officers for 5 years. Applicants, whose education and regimental experience justify it, will carry out a probationary course of a fortnight's duration under the chief staff officer of the division or area nearest the officer's residence. The probationary course is to consist of instruction in staff duties in the field only.

(d) On the reports obtained on the probationary course, officers will be selected by the Minister for War to undergo a course of at least 3 weeks at the Staff College. This course will be held annually in September ; it will consist of instruction in staff duties and visits to military establishments, and will count as the officers obligatory training for the year. On its conclusion, officers obtaining a satisfactory report will be placed on the reserve list for staff employment.

(e) The further training of such officers will be effected by (i) refresher courses ; (ii) periods of instruction. Refresher courses will be held at nine centres (Paris, Lille, Nantes, Bordeaux, Toulouse, Marseilles, Lyon, Nancy, Strasbourg) conducted by selected p. s. c. officers working under the direction of the Commandant of the Staff College. (It is understood that these courses will consist of voluntary lectures, exercises and correspondence classes). The " periods of instruction " will consist of attachments to the staff of formations or attendance at tours carried out by the Staff College.

EXTENSION OF AGE LIMIT FOR GENERAL OFFICERS SERVING ON THE SUPERIOR WAR COUNCIL.

1. The French Government in the autumn introduced a measure extending the ages of retirement for senior officers in the Army. The main results of the Bill would have been to slow up promotion throughout the Army and to maintain the existing personages on the Superior War Council.

2. This Bill met with strong opposition in the Army Commission of the Chamber ; the main objection was based on the necessity for comparatively young army commanders for war.

3. As a result of the opposition, the Government accepted a compromise measure which has now passed into law.

Under the new law, members of the Superior War Council may be maintained up to an age limit of 65 ; such officers will be " hors cadre " and thus will not delay promotion ; the vice-president of the Superior War Council, who will be commander-in-chief in war, may be retained up to the age of 68 ; all other officers are to be retired at the ages laid down in the 1920 law (*e. g.*, 62 for general officers).

4. The importance of this question is due to the fact that members of this council are designated to command armies in war. In peace each member has a permanent staff, which is a nucleus of his wartime staff.

5. Under present conditions an officer, if well placed, reaches the rank of colonel at the age of 50 ; he seldom completes tenure of a command or a corps before he is 60 or 61. He cannot become a member of the council until he has qualified as a corps commander. Hence, if he is to retire at 62, he would only serve 1 or 2 years on the council. It is considered, to make the council effective and to enable the generals to train their staffs, a member should serve a minimum of 4 years. Continuity of policy is considered essential for national defence.

6. It may be noted that generals who acted as army commanders during the war may be retained up to the age of 70 ; this will come to an end in January, 1929.

French Army Uniform.

Reference Military Intelligence Summary, Vol. 11, No. 6, October, 1927, page 219.

The new uniform for the army has now been selected by the special commission charged with this duty. It is stated that khaki is to be retained for the tunic, but that the breeches are to be pearl grey. The kepi is to be revived—not, however, in its historical form, but of hard felt with a horizontal peak, like those worn by our telegraph boys.

The pre-war uniforms will apparently only be worn by North African troops.

Army Cooking.

The *Journal Officiel* of 4th December contains a private members Bill, providing for the appointment of a master cook in regiments and independent units ; the master cook to rank as a company serjeant-major. The proposal is based on the difficulty of obtaining personnel adequately trained for cooking, with one year's service ; it is also intended probably to stimulate the recruiting of regular personnel.

Communist Activity in the French Army.

Further evidence of anti-militarist activity has been obtained owing to the arrest of a municipal dispenser at Athismons. Documents seized were examined by an officer of the General Staff and found to relate to national defence ; the documents are now being examined by the Ministry for War.

November, 1927.

1. *Douaumont during the German Occupation—Part III.*

By General Rouquerol. (To be continued.)

Of interest. A description from the German point of view of the French attack in October. The experiences of the three German divisions, occupying the ground of which Fort Douaumont was the key, are followed. The French artillery bombardment began on 14th October, and continued until the attack on the afternoon of 24th October. Graphic descriptions are given of the effects of the bombardment and the weather ; the difficulties of obtaining information, and of supply ; the statements of French prisoners and a deserter ; and of the moral and health of the troops. The attempts to launch counterattacks, first by a battalion, and then by a division, are of special interest. By the evening of 25th October the Germans recognised that they had lost Fort Douaumont.

2. *The Serbian Victories in 1914—Parts III and IV.* By Commandants Desmazes and Naoumovitch. (To be continued.)

Of interest, as a study of the action of large forces in mobile warfare. A historical narrative from the Serbian point of view of the battles on 16th-19th August, 1914. The sketch map gives no idea of the influence of the ground on the operations.

3. *The Qualities of a Commander—Part II.* By Lieut.-Colonel Lucas.

A clear analysis of the intellectual, professional and moral qualities required for high and subordinate command. For high command a creative imagination, based on the knowledge of human nature, guided by prudence and daring, with a strength of will to achieve one's object: details to be left to the staff and well selected advisers. For subordinate command eye for ground, initiative, technical knowledge and the power to teach are essentials. The influence of personal example is emphasised. A man may be a successful subordinate commander, but may not have the breadth of vision or knowledge for high command.

4. *To Study the Art of War: the Study of the Campaigns of Napoleon.* By General Camon.

Some notes on the political object, the plan, and the execution of the plan, in the case of the campaigns of 1796 (first phase), of 1814 in France, and of 1815 in Belgium.

5. *Troops for Mountain Warfare in the German Army.* By "X".

In 1914 Germany had no troops trained in mountain warfare. Experience on the Italian and Salonica fronts during the war showed the difficulty of improvising such troops. A summary is given of the present German peace organization for mountain warfare, an organization for war, and some tactical points.

December, 1927.

1. *Douaumont during the German Occupation.* By General Rouquerol. (Concluded.)

The experiences of the German garrison during the French bombardment, 18th-24th October, 1916, are described. The conclusions drawn by the author on these operations include, criticisms of the

counterattacks launched by the Germans ; the effects of gas shelling, especially on transport horses ; the value of Douaumont Fort itself—the power of resistance of concrete ; the necessity for adequate defence against gas and proper ventilation ; the provision of a distant underground means of communication with such forts, and the importance of a definite detail of special garrisons.

2. *A Study of the Defensive.* By General Brosse.

Of interest. The author contends that French regulations and training in defence are restricted to the methods successfully employed during 1918 ; notably on 15th July in Champagne. The value of surprise and hence constant change in the tactics of the defence is not sufficiently recognised. A clear analysis is given of the possible results of the withdrawal of the troops from the outpost zone as laid down in the regulations, and of the rôle of the artillery in the defence, and of outposts main zones of resistance. The main lessons of the great attacks of 1918 are shown to be timely disposition of reserves, early intelligence, adequate strength and preparation of counterattacks. Defence must be looked upon as an elastic manoeuvre, the success of which will depend on early information as regards the enemy's intentions and the concealment of our own dispositions. The influence of the air, tanks and gas on the tactics of the defence is not mentioned.

3. *The 2nd Infantry Division of the Prussian Guard, 21st and 22nd August, 1914.* By Commandant Maury. (To be continued.)

A historical narrative compiled from German, Belgian and French sources. The 2nd Infantry Division of the Prussian Guard formed part of von Bulow's II Army. Its task on 21st August was to secure the crossing of the river Sambre at Auvélais (8 km. east of Charleroi). The author describes an interesting case in which Ludendorff, as staff officer, decides a difference of opinion between two divisional commanders and authorizes the commander of the 2nd Prussian Guard Division to attack and cross the Sambre in spite of von Bulow's orders to the contrary.

4. *Infantry and Tanks.* By Colonel Velpry.

An interesting and clear study of co-operation between tanks and infantry.

5. *In French Morocco in 1925: The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (To be continued).

A clear summary of the operations from July, 1925, when the prestige of Abd-el-Krim was at its height, through the hot summer months, to the winter, when the military situation was restored.

6. *The Paris Motor Show, 1927.* By Lieut.-Colonel Dumenc. Of little military interest.

7. *The Centenary of the Battle of Navarino, 20th October, 1927.* By Lieut.-Colonel de Nerciat.

A historical note.

IRAQ.

The King.

The King arrived in London on 20th October to open discussions regarding the general question of Anglo-Iraqi relations.

Iraq-Syrian Boundary.

The survey of the Iraq-Syrian frontier between Jebel Sinjar and the Euphrates has been completed.

Anglo-Iraq Treaty.

A new Anglo-Iraq Treaty to regulate the relations of the two countries in supersession of the Agreement of 1922, was signed in London on 14th December.

ITALY.

Army Estimates.

The Italian Army Estimates 1927-28, as compared with the actual expenditure of the preceding year, are as follows:—

—			1927-28.	1926-27.	Difference.
			Lire.	Lire.	Lire.
Ordinary .. ..	..	..	2,432,731,300	2,421,000,000	+11,731,300
Extraordinary .. ..	..	..	341,927,745	345,192,746	—3,265,001
Total .. ..	..	..	2,774,659,045	2,766,192,746	+8,466,299

In 1926-27 the Estimates were as follows:—

		Lire.
Ordinary .. ..	..	2,230,207,000
Extraordinary .. ..	..	345,193,000
Total .. ..	..	2,575,400,000

Expenditure in this year therefore exceeded the estimates by 190,792,746 lire.

The totals for the 2 years are made up as follows :—

—	1927-28.	1926-27.	Difference.
Army	1,806,981,300	1,797,949,700	+9,031,600
Carabinieri	511,000,000	462,142,800	+48,857,200
Pensions, &c.	456,677,745	506,100,246	-49,422,501

The large increase in the Carabinieri and almost exactly corresponding decrease in pensions has been produced by the transfer of the allowances due to the personnel of the Carabinieri from the accounts of that force to the Pensions account.

The sum of lire 1,806,981,300 allotted for ordinary expenditure on the army is grouped under the following headings :—

1. General expenses	14,545,300	12,820,300	+1,725,000
2. Officers	430,130,300	433,050,000	-2,919,700
3. Civil employees	42,919,700	46,225,000	-3,305,300
4. Other ranks	855,410,000	839,735,000	+15,675,000
5. Animals	128,800,000	130,200,000	-1,400,000
6. Artillery, engineering and M. T. material.	180,700,000	168,915,000	+11,785,000
7. Buildings and works.. .. .	42,700,000	50,400,000	-7,700,000
8. Miscellaneous	77,776,000	82,316,000	-4,540,000
9. Unallotted funds	34,000,000	33,288,400	+711,600
	1,806,981,300	1,797,949,700	9,031,600

The following are the principal increases and decreases shown under detailed headings :—

2. *Officers*.—The decrease in expenditure of lire 2,919,700 is chiefly due to a general decrease in allowances granted to officers.

3. *Civil Employees*.—This decrease is also chiefly due to certain allowances being abolished.

4. *Other Ranks*.—The increase of lire 15,675,000 is mainly due to :—

(a) Rise in cost of foodstuffs.

(b) Movement of troops.

(c) Re-enlistment bonuses and fixed allowances to N.-C. O.'s.

5. *Artillery Engineers and Mechanical Transport*.—The increase of lire 11,785,000 is chiefly due to increased expenditure for the M/T service, renewal of motor lorries, machinery, raw material, workshop expenses and labour.

6. *Buildings and Works.*—The decrease of lire 7,700,000 is due to minor expenditure incurred for maintenance and improvements of military buildings, military offices and rifle ranges.

7. *Miscellaneous.*—Decrease of expenditure on the following items:—Medical assistance, instruction, telegraph, telephone and postal services, repairs to cycles, minor expenses, &c.

The average rate of exchange for the year 1927 is 89 lire to the pound sterling.

MOROCCO.

French Zone.

The situation remains generally quiet.

Mulai Yusef, Sultan of Morocco, died on 17th November, and was succeeded by his third son, Sidi Mohamed, aged 18, who will take the name of Mulai Mohamed.

It is of interest that one of the new Sultan's elder brothers, Mulai-el-Hassan, who has been passed over, is at present Khalifa of the Spanish Zone.

The two parties of French settlers captured by bandits in the Middle Atlas, have been released after payment by the French authorities of the huge ransom of 7,000,000 francs in silver.

There was some fear that this payment by the French might lead to a serious loss of prestige. Actually the French appear to be profiting by the incident. Negotiations for the ransom brought the French for the first time into direct touch with certain tribes (the Ait Shokman) of the Middle Atlas, who had hitherto always refused to deal with the French. All sections of this group of tribes took part in the negotiations, in order to ensure having a share of the booty. The French are thus at liberty to deal with the group as a whole.

The French are playing on the tribesmen's superstitious nature and have proclaimed the ransom money as "accursed."

The tribesmen were solemnly warned that they would pay dearly for the money, and would have no peace until it was refunded. The French have now doubled their posts on the boundary of the Ait Shokman country, and intend to blockade the district until the tribes submit.

The tribes of the High and Middle Atlas are dependent on the fertile plain for corn and other necessities, and their only outlet for supplies has now been cut off.

Aeroplanes have flown over tribal territory threatening military action.

Spanish Zone.

The situation remains quiet. Every endeavour is being made to complete the main arterial roads before the bad weather sets in ; considerable difficulty has already been experienced in supplying advanced posts in roadless districts, owing to heavy rain.

The Melilla—Sheshewan—Tetuan—Ceuta motor road is now open for traffic.

All infantry and sapper-miner expeditionary companies have now been repatriated. The strength has also been reduced by granting 4 months' leave to Spanish conscripts of the second group of the 1926 class, belonging to Permanent corps in Morocco.

A Royal decree of 31st October, places the civil administration of Ceuta and Melilla directly under the High Commissioner, instead of being controlled by military governors. This is of interest as foreshadowing the gradual substitution of civil for military control in the zone.

His Majesty's Ambassador at Madrid recently visited the Spanish Zone and was much impressed with the type of Spanish officer employed in Morocco. He considers the Spaniards are proceeding on sound lines in their relations with the Moors, whose religious susceptibilities and customs are being scrupulously respected. No Christian troops are quartered in Sheshewan, which is a holy city to the Mahommedans, and no Christian is allowed to set foot in the town after 6 p.m.

French Zone.

The situation remains generally quiet ; a small party of Sengalese were attacked in the Ouergha district, north of Fez, and two men killed. To avoid further kidnapping cases, regulations have been issued to restrict the movement of Europeans in the dangerous districts on the borders of the French zone. In Southern Morocco, the French Administration has scored a considerable success ; the Ida Watana tribes, comprising some 7,000 families in the Mogador-Agadir region, have made their submission. This will greatly facilitate the construction of roads and communications in this district.

Spanish Zone.

General.

The situation remains quiet. The collection of arms is continuing and 1,000 rifles were brought in during November. The forces in

Morocco have been reduced to 90,000, and this is intended to be the maximum garrison in the future.

Experimental mountain unit.

A special mountain unit is being raised from native soldiers in the Eastern Zone, for service in the Southern Riff ; if successful, a second unit will be raised for the Ghomara.

The men will be issued with skis and special waterproof clothing.

The need of such units has been acutely felt during the bad weather in Morocco, when many advanced posts were cut off by deep snow.

PERSIA.

Conscription.

The result of compulsory recruiting in the Kazvin district for the year 1926-27 is said to have been—

Number of those who drew lots ..	3,550
Number taken for military service..	1,076

Persia-Soviet Agreement.

As a result of protracted negotiations between the Persian and Russian Governments, a Neutrality Pact and a Trade Agreement, on much the same lines as those already concluded between Russia and Turkey, were signed on 1st October and ratified on 21st October.

Concurrently with the above, agreements were signed under which the Caspian Sea fisheries controversy was settled by the establishment of a joint Russo-Persian company to work the fisheries ; the Port of Pahlevi was returned to Persia, and " most favoured nation" treatment was mutually accorded in customs and tariff questions.

Conscription.

Conscription ceased in Teheran on 12th November. It is reported that out of a total of 3,342 called for, 1,111 were taken. The latter were, however, given a certificate stating that, although they had been conscripted, they would not be called to the colours for the time being. This action is presumably taken by the authorities to avoid precipitating demonstrations in the Capital in sympathy with those that have taken place in other parts of the country.

SOVIET UNION.

DEMONSTRATION OF THE PREPAREDNESS FOR DEFENCE.

Leningrad, 5th.

During the International Youths' Day, Leningrad was marked by a magnificent demonstration organized by the workmen under control

of the Komsomoltsi organization. Processions commenced punctually at 12 o'clock, and the march past of the young men continued until 3 o'clock.

The first procession consisted of young men from the Putilov factory, and had at their head a detachment of infantry, which called forth enthusiastic applause. Not only the huge factories such as the "Red Putilov," "Treugolnik," "Skorohod," "Baltiski," which have thousands of Komsomoltsi cells, created infantry, medical and chemical and other groups and detachments, but also the smaller works and, factories, such as "Ravenstvo," "Krasnaya Zvezda," "Promet," "Stenka Razin" Typography, tram parks, telephone stations and others, demonstrated first and foremost their preparedness for defence.

Works after works, over a period of 3 hours, displayed disciplined ranks of pioneer detachments of Komsomoltsi columns, chemical, medical and infantry groups and detachments. Some works, such as the "Proletariat" and others, have whole companies of infantry. In each area were noticeable strong detachments of young cyclists—the future scouts.

There was special attention (which called forth a long and loud ovation), for the detachment of young Chinamen, who are preparing for a war against their own and international bourgeoisie. ("Krasnaya Zvezda," No. 202 of 6th September, 1927.)

"Trial Mobilization"—Test of War preparedness.

Recently in some areas of the S.S.S.R. trial mobilizations have been carried out for those subject to military law. Our military correspondent received the information about the object and the problem relative to the trial mobilization. The fundamental problem of the test mobilization first and foremost is a periodical organized confirmation of the preparedness of war of the Soviet Republic. The work, which aims at training the population of the masses of the country in strengthening the defence of the S.S.S.R. like all other responsible work has to be tested. The commencement in some areas of this test mobilization takes the place of an examination of fitness for mobilization, such tests of mobilization again serves to give experience and bring out the valuable lessons and eliminate irregularity and inaccuracy. Test mobilization is of special importance at the present moment when the international situation is highly critical, when the Imperialistic powers are feverishly preparing for war and finally when the question

of a preparedness for defence of the frontiers of the Soviet State, has become the most important question of the day. Therefore, the carrying out of the trial mobilization and its results is the best indication of the will of the masses of the workmen and peasants. How is a trial mobilization to be carried out? First and foremost a trial mobilization should correspond as near as possible to an actual mobilization. Only under these conditions can a genuine test of preparedness for mobilization be obtained. If the trial mobilization is not carried out seriously by those who are being called up, by inaccurate and deficient attendance, it does away with the practical mobilization and does not enable us to gauge accurately the defensive preparations of our country.

A trial mobilization includes the calling up of those liable to military service, also the organization of horses, carts, transportation, &c.

At the end of the mobilization those who are liable to military service disperse to their homes. The area and time to be called up is decided by the Soviet of Work and Defence. Horses, carts and harness are returned to their owners with a payment for use of horse and cart as laid down on a definite military price—2 roubles for 24 hours is paid for the use of a horse (for the use of harness and cart 1 rouble for 24 hours).

In a trial mobilization the responsibility problem rests on agricultural organization and co-operative societies. The subsidy of industrial and trade workers during mobilization period is demanded from these bodies. The liaison with the military authorities, of the Supply and Co-operative Societies, and of all trading and Soviet institutions, and also organization in their work together guarantee a successful carrying out of trial mobilization.

(Karasnaya Zvezda No. 202 of 6th September, 1927).

Translation from "Sevodniya" (a White Russian paper published in Riga) of 31st August.

MANŒUVRES IN THE U. S. S. R. ("Sevodniya" communication), Moscow, 28th August.

This year's autumn manœuvres will have a particularly grandiose character. Nearly all units of the Red Army will take part in them, as will the Fleet and the Air Force.

The Deputy Chiefs of the General Staff, Pugachev and Pastukhov, declared in interviews with journalists that the aim of the manœuvres was the co-operation of different troops and the Fleet in military operations. It has furthermore been decided to use the manœuvres for military agitation among the civil population. Arrangements have been made for including in certain manœuvre tasks special crews from "Aviokhim" (the League for fostering aviation and chemical warfare), members from the trade unions and the "Komsomol" (Communist League of Youth). Furthermore, special lectures and agitators are to explain to the population during the manœuvres their military aims and their significance in relation to the threatened assault on the U. S. S. R. by the "Imperialists". Special importance is attached by military circles to the manœuvres around Odessa, in which nearly all the troops of the Ukrainian military district and the Black Sea Fleet will participate. The aim of the manœuvres is connected with the possibility of military conflicts with Roumania. In order to prepare the Odessa manœuvres the Chief of Staff of the Red Army "himself," Tukhachevsky, has arrived in Odessa. He has hoisted his flag on the warship "International," on board of which he carried out a one day's cruise together with the whole Black Sea Fleet.

After this cruise there was a meeting of sailors at which Tukhachevsky delivered a long speech concerning the international and military position of the Soviet Republic. The sense of this speech amounted to saying that the present manœuvres might be the last "rehearsal of the military campaign, which might start sooner than was supposed." The Odessa Executive Committee formally decided to give every help to the Red Army at the manœuvres and to begin a special agitation campaign for giving information and explanations as to them. TRIAL MOBILIZATION IN LENINGRAD. (Telegram from "Sevodniya" Reval correspondent.)

According to information received in Reval a trial mobilization was today ordered in the Leningrad military area. The mobilization is a kind of test of the readiness of the Red Army to stand on the defensive for Russia in case of a declaration of war. It is here stated that the Soviet authorities are officially explaining this test mobilization by the present strained position of the U. S. S. R. in the international field.

Red Army.

In accordance with R. V. S. order No. 399 of 5th August, 1927, the following other ranks of the regular army are to be released from the colours in the autumn of this year :—

- (a) Men called up in 1925 who complete 2 years' service, counting from 1st January, 1926.
- (b) Men called up in 1924 who complete 3 years' service, counting from 1st January, 1925.
- (c) Men who complete 4 years' service, counting from 1st January, 1924.
- (d) Men who have passed the examination for the grade of reserve commander in the Red Army, who, having been called up in 1926, will have completed 1 year's service.
- (e) Volunteers and re-engaged men who, having completed their term of service, wish to be discharged.

2. Release of men from units and establishments of the Red Army, except G. P. U. units and "Convoy" Guard troops, to be carried out between 25th September and 1st December, 1927.

3. Release of men from G. P. U. units, including the Frontier Guard, is to be carried out as follows :—

From G. P. U. formations by 15th January, 1928.

,, Frontier Guards by 1st April, 1928.

4. Release of men from "Convoy" Guard troops is to be carried out between 1st December and 1st January.

(Extracts from the "Krasnaya Zvezda".)

SHORT HISTORY OF THE OSOVIAKHIM.

The Osoviakhim is a powerful public organization of the masses, created by the Soviet with a view to co-operation with the State in the organization of aero-chemical defence of the country.

There is no corner in the Soviet Union where the organization of the Osoviakhim does not exist. The furthest areas of the republic are in the grip of a network of cells of the public society of the Osoviakhim.

In 1923 the O. D. V. F. (The Society of Friends of the Air Fleet) was created.

In 1924 the Dobrokhim (The Society of Friends of Chemical Industry) was established.

A year after, in May, 1925, these societies were changed to the "Sojus Aviakhim S. S. S. R." (The Society for assisting Aviation and Chemistry).

In 1922 the V. N. O. (Military Scientific Society) was changed into the O. S. O. (Society for Co-operation in Defence).

In January, 1927, a union took place between the "Society for assisting Aviation and Chemistry" and the "Society for Co-operation in Defence" and was then re-named Osoviakhim (The Society for the Organization of Aero-Chemical Defence of the S. S. S. R.) known officially as "Sojus Osoviakhim S. S. S. R."

The Osoviakhim is a voluntary organization of the wide masses of the people.

In January, 1925, the Society O. D. V. F. consisted of 1,898,630 members. On the 1st October, 1925, this figure rose to 2,569,265. During the period 1st October, 1925-26 the Society changed from collective membership to the principle of individual voluntary membership, and carried out a registration of its members on the basis of their willingness to remain in the Society and work for its cause. The result of this campaign was that a part of the collective membership left the Society, and on the 1st October, 1926, the Society numbered only 1,986,324, but on the other hand improved the quality of its members. During the last year October, 1926-27, as a result of the fusion between the Aviakhim and O. S. O., and the campaign of the "Week of Defence," the membership of the Society rose (1st April, 1927) according to unofficial figures to 2,516,340. The growth of the membership is still in course of progress.

The social standing of the members in the Society is the following :—

			per cent.
Workers	..	..	36·4
Peasants	..	..	18·7
Employees	..	..	29·5
Soldiers	..	..	8·6
Others (active)	..	..	6·8

It will therefore be seen that the bulk of the members of the Society is composed of workers and peasants.

Corresponding to the growth of the membership, there has been also an increase in the lower cells of the Society.

	Cells.
On the 1st April, 1925, the O. D. V. F. cells numbered ..	29,868
„ December, 1925, the O. D. V. F. cells numbered ..	33,920
„ October, 1926, the O. D. V. F. cells numbered ..	33,068
„ August, 1927, the O. D. V. F. numbered ..	36,093

the social standing of the different cells is divided as follows :—

		per cent.
Industrial workers	.. ..	20
Country workers	.. ..	33·9
Officials	.. ..	32
Military (soldiers)	.. ..	6·2
Scholars	.. ..	7·9

The above figures show the growth of the Society during the last 4½ years.

During these years the Society have carried out successful work in agitation and propaganda. At the present moment the Osoviakhim possesses :—

- 33 aero-chemical museums.
- 33 clubs.
- 6,995 corners.
- 1,178 aero-chemical groups.
- 1,942 libraries.
- 1,283 groups of flying recreation (models, plans, &c.).
- 202 chemical laboratories.
- 27 permanent exhibitions.
- 3,063 groups of military education.
- 4,207 groups of infantry.
- 617 groups of medical.
- 836 groups of rifle ranges.

In 1926 there was added an economic section with 7,466 groups for the furtherance of mineral research.

In addition to the above numerated practical organizations throughout the Soviet Union, the Society has several different groups, commands, &c., which have not been taken into account.

Groups of military education.

Medical and fighting groups.

Rifle ranges and many other units and detachments which for the most part were created during the "Week of Defence," can without doubt be classed as a practical result of the summer campaign.

This year in Moscow, the Osoviakhim S. S. S. R. opened a central air museum under the name of "Tovarich M. V. Frunze."

This museum is the central and fundamental archive which the Aviation and Chemical Department possess, not only in our Society,

but throughout the Soviet Union, and also the central home of the aviation-chemical enlightenment of the toiling masses of the country.

In the tens of thousands of lower organizations of the Osoviakhim (cells, groups, &c.) there has been carried out and continues a colossal work in the militarization of the population, the development of the activities of the Society, military propaganda and aviation and chemical knowledge. If to this is added the editorial work of the Society during the last 4½ years, that is the tens of millions of books, pamphlets, circulars, &c., edited and circulated throughout the country, the agitation cars in these years covered thousands of points and carried out numerous agitation campaigns. This gives a clear picture of the gigantic work of the Society in the furtherance of agitation and propaganda.

The campaign of 1923, the first period of the existence of the O. D. V. F., in answer to the Curzon Note presented to the State complete war esquadrones of the Air Fleet. In round numbers, more than 150 aeroplanes and 1,000,000 roubles for the creation of the Red Army, and for the development of peace industries of the country.

The Chamberlain Note of 1927 evoked in answer the campaign of the "Week of Defence," which was carried out with no less, if not with greater enthusiasm than the campaign of 1923. The "Week of Defence" stirred both the town and the village. Interest shown by the peasants was no less than that shown in the town, as a result the "Week of Defence" collected throughout the Soviet Union about 5,000,000 roubles for the fund for defence called "Our Answer to Chamberlain". The might of the Osoviakhim, after the "Week of Defence" considerably increased. The number of members increased to half a million new members. An activity arose among the members of the masses, a considerable interest was noticed on the part of the toiling masses to the question of military organization, preparation of the country for defence, military work, and aviation and chemical knowledge.

SPAIN.

Unrest in Catalonia.

The French police authorities have rendered abortive a fresh attempt by Catalan Separatists to cross the Spanish frontier and raise an insurrection in Catalonia. On 25th October, detachments of French gendarmerie were sent to Foix, Perpignan and other places

on the Franco-Spanish border, in order to prevent any violation of the Spanish frontier; troops were also held in readiness.

Reinforcements for Morocco.

As soon as barracks are available, six battalions are to be stationed in the following places in Southern Spain, as a reserve for Morocco :—

Jerez, Algeciras, Malaga, Almeria, Alicante.

The 1927 Class.

The first group of the 1927 Class (men born in the first 5 months of 1906 and men set back from previous classes) was called up in November; the strength is 60,500 compared to 56,200 for the first group of 1926; 18,709 recruits are allotted to Morocco, compared to 18,598 for the first group of 1926.

SWEDEN.

Manœuvres, 1927.

Swedish Army Manœuvres took place in the Vannas—Umea area (on the west coast of the Gulf of Bothnia) from 27th September to 1st October last.

2. Umea itself is a small town about 10 miles from the mouth of the River Umea (Ume—Alf); this river is here about 200 yards wide, 22 feet deep and has a very swift stream; above Umea it becomes unnavigable owing to a large cataract. The whole area is heavily wooded and hilly, without being broken; the valley of the Ume—Alf itself, however, is comparatively open and studded with hamlets.

3. The following troops took part in the operations :—

Blue :

Headquarters.

6th Division—

Headquarters.

11th and 12th Infantry Brigades (each 2 regiments).

8th Norlands Dragoon Regiment.

4th F. A. Regiment.

Detachments, Engineers, R. A. S. C., and Intendantur.

6th (Reconnaissance) Wing, Air Force.

Army troops.

Red :

Headquarters.

7th Division—

Headquarters.

13th Infantry Brigade.

19th Infantry Regiment.

2nd Life Dragoon Regiment (less 2 squadrons).

8th F. A. Regiment.

Detachments, Engineers, R. A. S. C., and Intendantur.

7th (Reconnaissance) Wing, Air Force.

Army troops.

4. The general scheme of the manoeuvres was based on the Russian invasion of Sweden in 1809, under Barclay de Tolly, who crossed the frozen Gulf of Bothnia, and captured Umea. In this case, the main Red Forces (imaginary) were supposed to have landed at Nordmaling and Oruskoldsvik (50 and 100 kms. respectively south of Umea), while a detachment, with whom the operations dealt landed at Umea and was opposed by the (real) Blue Force, with corresponding (imaginary) Blue defending formations to the south. The first situation opened with the Red Force safely ashore and in possession of Umea.

5. The operations commenced with an advance by the Red commander, astride the river, with the object of gaining the Brannland bridge. He failed to gain this objective and, in order to avoid defeat in detail, was compelled to fall back to Umea to reunite his forces. The Blue commander, meanwhile, having failed to pin the enemy to his ground on the south bank, crossed the river by the Brannland bridge and, by the close of operations on the 1st October, a battle was impending north-west of Umea.

SYRIA.

General.

The situation remains generally quiet ; there has been some fighting amongst the Ruwalla tribe, owing to rivalry between clan leaders. Ilai-ed-Din Fattah, one of the leaders of the Syrian revolt, has made his submission to the French and been amnestied.

The Druze Refugees.

The quarrels between the Syrian rebel leaders continue. Sultan Attrash has been refused permission to reside in Transjordan, but has been told that he may do so in Palestine, if he gives guarantees of good behaviour. It is reported that the number of fighting men with Sultan Attrash is dwindling.

CORRESPONDENCE.

POTTED MANUALS.

DEAR SIR,

Field Service Regulations, Vol. 2, states :—The efficiency of the leaders of the smallest units will often be the measure of an Army's success. In discussions on training, this is one of the best known and most frequently quoted phrases.

The word "efficiency", in so far as the duties of the section leader in battle is concerned, is defined for us in the manuals as the correct use of weapons, ground and formations, or in other words as a knowledge of minor tactics and the ability to apply that knowledge under service conditions.

While the standard reached in units in weapon training is nearly always satisfactory, thanks to the generous allotment of time given to it in the training year, it is the exception to meet a unit officer who does not bewail the fact that his section leaders fall far short of his ideal in tactical knowledge and skill. The causes appear to be :—

(a) Lack of time for holding a sufficient number of minor tactical exercises.

(b) In the infantry the lack of an infantry school, run on the same lines as the cavalry school, and the lack also of a mountain warfare school. Both these deficiencies can presumably be attributed to our old enemy—Financial Stringency.

(c) Last, but by no means least, the lack of training manuals which the junior N.-C. O. can read and understand.

The British officer is expected to keep up, read, amend, understand, and digest some fifteen or twenty manuals, not a few of them of considerable bulk. The majority of these books contains knowledge which the junior N.-C. O. requires to know if he is to be classified as efficient.

The standard of literacy attained among the junior ranks of the Indian army is rising fairly rapidly, the thirst for knowledge is usually there, but suitable official books in Roman Urdu, with the notable exception of section leading, are not to be had. When section leading made its appearance after the war it was welcomed with acclamation. The writer knew of one battalion in which the commanding officer was wont to become somewhat heated if he found a British Officer on parade during the collective training season without a copy of it on

his person. Even so, section leading contains no information on such important subjects as:—Use of weapons, Care of Arms, Mountain Warfare, Sangaring, Entrenching, Rapid Wiring, and Sanitation. Information on these subjects must be sought in several manuals, some of them bulky, and which for this reason have not yet been produced in Roman Urdu. Again, section leading is for the infantry. There is no similar book for machine gunners, cavalry, or artillery.

Unofficial books do indeed exist—some of them published commercially, and others produced by units for their own use. The schools of instruction also endeavour to bridge the gap with notes. The former however tend to spread incorrect teaching, and the latter are not generally available.

The solution to the problem is, obviously, what may be called, for want of a better title, a Potted Manual, for each arm of the service, starting with the infantry, whose need is possibly greatest there being no infantry school. The difficulties in the way of their preparation are however considerable. In order to arrive at the form which these potted manuals must take, let us first examine why the present manuals are unsuitable for the junior ranks of the Indian army.

1. They deal mainly with principles. To apply a principle correctly under various conditions requires a brain capable of logical reasoning, an attribute all too rare.

2. Even in infantry training, there is much which is applicable only to the formation, or battalion, or company commander. Thus the section leader in search of learning has to wade through many pages which are of little value to him, and which tend to confuse the issue.

3. The language used is frequently somewhat involved, and the words and sentences are too long. This is often unavoidable in defining and explaining a principle, and presents no difficulty to an educated and careful reader. It does, however, present considerable difficulty to those with less education and power of concentration. In translating such passages into Hindustani it is often necessary to paraphrase, with the result that quite a short sentence in English, may become a paragraph in Hindustani.

4. Amendments to the English manuals appear with distressing frequency, and the number of manuals in possession of officers which from one cause or another fail to get amended is not inconsiderable. If this is true of the English manual and the British officer, how much

more true will it not be of the Roman Urdu manual and the Indian officer and N.-C. O., who has no pot of stick-phast readily available.

To deal with the above points seriatim :—

1. The manuals are written to cover comprehensively the many forms of warfare under the various conditions of climate, terrain, and characteristics of the enemy which the army, including the forces of India and the Dominions, are called upon to face in the outlying parts of the Empire. The Indian Army's primary duty is the defence of the North-West Frontier either against the tribesmen, or against external aggression. The ability of the N.-C. O., to reason logically cannot be said to be highly developed; principles are therefore of little use to the great majority. Can a manual not be produced for each arm, laying down in simple language tactical rules, with especial reference to frontier warfare? The Indian has an admirable memory, and all his inclinations tend towards memorising and following rules laid down for his guidance. The N.-C. O. frequently dislikes to accept responsibility if it can be avoided, and this may lead him to commit the cardinal sin in war of inaction. If he can put the responsibility upon a rule and thereby adopt some definite course of action, even though not the best, the ultimate results is likely to be much better than if he does nothing.

This does not mean that the N.-C. O. would be deprived of initiative. The intention is that the principles governing the various actions of war should be narrowed down to suit the situation with which the junior N.-C. O. is likely to be faced. This can be done so as to put clearly before him two or three alternative courses of action. An excellent example is to be found in section leading, Chapter X, "The Attack," 3rd Phase The Fire Fight".

"When the scouts are checked, the section leader leads his section close up to the scouts, and halts under cover. He then hears from the scout the information concerning the enemy, and studies the ground.

He then has to decide which of two alternatives he will take—either (i) continue to advance, or (ii) stop and open fire. In coming to a decision he must be guided by circumstances remembering that the fact of continuing to advance would generally be the best means of helping a neighbour, and that, as a principle, fire should rarely be opened in attack when satisfactory progress can be made without it."

Possibly the last sentence above might present difficulties to an uneducated reader, especially if translated literally into Hindustani, and might be put more simply as follows :—

“ He must remember that :—

He will generally help other sections more by pressing on than by stopping to fire.

He should not halt to fire if he can get forward without firing.”

The sense of the word, “ rarely ” has been disregarded. It legislates for special cases, and if we are to keep our Potted Manual small, and our teaching simple and clear, we must be prepared to be ruthless in cutting out such special cases. By so doing we lay ourselves open to the student of tactics saying—“ Ah, but this rule has exceptions and is therefore a bad and dangerous rule.” Our reply must be—“ you are correct, but we cannot burden the junior N.-C. O.’s brain with special rules for special cases. It is better to give him a clear rule which will be right in nine cases out of ten.”

The alternative to producing a set of rules is to train and retrain the N.-C. O., under varying conditions of ground, time, space, etc., until correct action becomes instinctive. This is a tedious and lengthy process for which it is hard to find time in an already crowded training year, and which fails to take advantage of his newly acquired literacy.

2. The manuals will require ruthless pruning, even at the expense of cutting out much which might under exceptional circumstances be of use. A General Staff Officer, with imagination and a blue pencil, should be able to do this. At the same time we must put into one book all that the N.-C. O., requires to know both on collective training and on service. The method followed in the Field Service Pocket Book might serve as a guide.

3. The language used must be the simplest, short words, and short sentences, with a very sparing use of the passive voice. It must also be so expressed and arranged as to admit of easy translation into clear and simple Hindustani. The more that the writer can lay down rules, as opposed to principles, the more simple does the choice of words and style become.

4. The book will speedily become out of date, but being a small book it should not prove financially impossible to reprint it say, every two years, and thus avoid the issue of any amendments.

It is, in the writer’s opinion, not an exaggeration to state that such a book, for each arm of the Service, would at once prove its

popularity. There is no doubt that many Indian N.-C. O's would gladly buy such a book, provided it was issued under the authority of Army Headquarters, and the price was not more than Re. 1/-.

Yours faithfully,
D. B. MACKENZIE, CAPT.

TO MEMBERS PROCEEDING HOME.

From a letter recently received from the House Governor, it would appear that the Officer's Convalescent Home, Osborne House, Cowes, Isle of Wight, is not well known to Officers of the Indian Army.

Accommodation exists for some 60 officers and the inclusive charge is 6/- a day for officers on the active list, or 4/6 if on half-pay.

Osborne House was one of the favourite residences of the late Queen Victoria and was presented to the Nation as a Convalescent Home for officers by the late King Edward VII.

It is situated in charming grounds of 400 acres, which contain a first-class nine hole golf-course, tennis courts, etc., and facilities exist for practically all out-door and in-door recreation. There is limited accommodation for wives in a hostel attached to the Home. Massage and Electrical treatment are provided. Accommodation is almost always available and officers of the Indian Army wishing to go to Osborne Home should apply to the Military Secretary, India Office for admission. There are no formalities such as Medical Boards and any officer wanting a change may be admitted if accommodation is available.

Editor.

REVIEWS.

THE GREAT PYRAMID AND ITS PURPOSE.

By

D. DAVIDSON AND H. ALDERSMITH.

*(Williams and Norgate Ltd., London 1926) 25s.**The Great Pyramid and its Purpose.*

Very considerable interest is being taken in England at the present time in what is alleged to be the Divine prophecy concerning the future of the British race embodied in the Pyramid passages. The particular point on which attention centres at the moment is the definite prediction that Armageddon or circumstances involving an eight years' world war of greater intensity than the last, is to commence at midnight 29/30th May 1928.

The Argument.

It is argued that the Pyramid is a "Bible in Stone" and that the dates and details agree exactly not only with Bible prophecy, but also with the sacred books of the Egyptians, written at a time when the more than human science of the Adamic race was still preserved by the Egyptian priesthood. The inferences are said to be confirmed by the extraordinarily accurate astronomical facts emphasised in the whole structure, facts only capable of verification in the present century.

Its Present Interest.

The reason why the subject has attracted so much notice in the last ten years is the flood of light which has been shed by archæologists "in the latter days" in analysing the sacred writings in hieroglyph and cuneiform.

The above claims appeared to the writer to justify investigations, and the result of certain necessarily imperfect enquiries into facts ascertainable are set forth below.

History.

Ever since the Caliph Al Mamoon quarried a way into the Pyramid passages early in the 9th century, there have been many who thought that their unexplainable formations symbolized some hidden prophetic purpose. Napoleon had measurements taken, and various other investigations were carried out. But the first scientific attempt made was by Professor Piazzi Smith, Astronomer Royal of Scotland, in 1865, followed by many others, including Civil Engineer. The first really connected argument identifying the Grand Gallery (see plates) with the Anglo-Saxon Christian Dispensation was published

by Col. Garnier, R. E., in 1905. The present position of the science is due mainly to the monumental labours of Mr. D. Davidson, M. C., M. I., Struc. E., who has given up his lucrative prospects in the engineering world so as to study Pyramid records. His enquiries have demanded a knowledge of architecture, astronomy, and mathematics and archæology not ordinarily attainable by any one man, and Davidson has been so convinced of the worthiness of his cause that complete elucidation of the riddles and symbolisms of his "Bible in Stone" has become the one purpose of his life.

The case against.

On the other hand, there are aspects of the subject which rather discredit the many convincing features put forward. The Egyptologists, as a whole, are sceptical and base their objections on several presumptions, each of which is refuted by Davidson. They find that the dimensions of the Pyramid base on which many measurements are based, are upset by the recent (1925) Egyptian Government Survey. This Davidson meets by reckoning the difference as a phase of his "displacement" theory, to be discussed later. Egyptologists, headed by Sir Flinders Petrie, who surveyed the Pyramids officially and has written much on the subject, maintain that the Pyramid was a tomb, which Davidson denies with very convincing arguments.

They also point out that the Egyptian King Lists, which Davidson says were forged by the Egyptians themselves in Pholemy's times, do not fit in with the Pyramid dating.

The fact remains that so far as can be traced, few well-known men of science have lent their names and reputations to support the theories, and it is also true that certain sections of rather advanced British Israelite propaganda have adopted the cause as their own. Most of the literature on the subject has a religious savour, and is interlard with texts and assertions postulating the blind acceptance of Holy Writ as part of the argument. Most intelligent research in this century prefers to base its enquiry on logical proofs rather than neurotic postulates.

The above are serious points of disagreement and should be borne in mind in perusing the "case for the defence."

Study of the Subject.

After reading pamphlets on the subject by the Revd. C. C. Dobson and Basil Stewart, which referred points of doubt to "The Great Pyramid, its Divine Message," by Davidson and Aldersmith, the

writer studied this last, and was amazed by the immense mass of unsystematised information thrown at the reader's head. While able to follow more or less the various proofs advanced, the present writer felt that the failure to make a clear cut case by such an obviously able exponent could only mean that the exponent was not himself convinced. This impression was somewhat altered by the series of articles in the *Morning Post*, 17-22 October 1927, which gave a much more connected argument, if not an entirely convincing one.

Superhuman Agencies.

It is now accepted by the world of science that certain manifestations of thought transference and occult suggestion definitely exist in our Kosmos, impressions which if not "revelations" have been so often and so categorically recorded that even the plain man must now admit that psychic factors have to be reckoned with.

The Pyramid enthusiasts go further, and say that many of these factors are the manifestations of a Divine will, and that the stored up and inspired knowledge of the "chosen" Adamic race is perpetuated in a "Pillar of Stone", and that the impulse to build this monument was a kind of super-inspiration of greater and more considered purpose than the comparatively minor promptings as recorded in psychic research and in historical episodes.

Proofs Advanced.

In his "Great Pyramid" (William & Norgate, 1926, 25 shillings net) Davidson lays himself out to prove that :—

1. The Pyramid is a geometrical representation of the mathematical basis of the science of a former advanced civilization.
2. That in the Pyramid this knowledge was condensed into a formula analogous to Einstein's theory, and that this knowledge pervaded all branches of that earliest civilization.
3. That the independent Egyptian civil records, *e.g.*, Manetho's "Book of the Dead" and premessianic records define the geometrical dimensions of the Pyramid, the units of measure, and the allegorical symbolism and purpose of the Pyramid's construction. He maintains that the agreement of these various authorities and their harmony with biblical prophecy is confirmed by Sir Flinders Petrie's works and his official survey.
4. He considers the passage systems to be an elaborate graphic representation of prophetic chronology, "intimately related" to biblical prophecy, and giving so many definite dates of important

events in Messianic history as to disarm any suspicion of systematic fabrication.

5. He brings out that the final time of tribulation for which the Pyramid record was predestined, is now upon us.

6. He argues with some plausibility that the whole record has been enshrined, so to speak, in amber, against the time when the British race, the makrocephalic Adamic type should fulfil its destiny. This race was to preserve its identity through the changing evolutions of many centuries to become, after a life and death struggle against Russian hordes, the final survival of the chosen people, a people not necessarily Jewish or even the seed of Abraham, but the Adamic stock which for so many centuries preserved the knowledge of the Egyptian priesthood.

His main contention in favour of this view is the British inch, the only scientific measure of any antiquity now surviving. In confirmation he adduces many contributory facts from prophecy and Egyptian sacred records which have considerable bearing on the subject. It is his misfortune that many of these, sometimes circumstantial and at others rather specious arguments, have been used *ad navseam* by the British Israelites, to which cause he is to some extent sympathetic but quite independently of his Pyramid reasoning.

Scope of Davidson's Work.

Davidson divides his work of 700 pages (11"x 7" with 70 plates and 67 tables) into five chapters, of which each is in three parts, the first (so called) argument and narrative; the second and third parts, to be read at the second reading, accessory and explanatory.

Chapter I covers ancient metrology, founded on the functions of the Earth and its orbit, with the Solar year as the time unit and the British inch, a 500 millionth part of the Earth's Polar diameter as the linear unit. The last was the basis of Egyptian metrological texts and of the Hebrew cubit. The Pyramid is represented as a sort of super-calendar and index of sowing dates to the ancient Egyptian world and to be the superhuman design for other Sun Calendars such as Stonehenge, perpetuated in other climes by the wanderers of the original Adamic race.

Chapter II shows that the Pyramid's exterior was based on gravitational astronomy. The author introduces his "Displacement" theory, that universal defect in human as opposed to Divine effort, which is emphasised in all Messianic (and Islamic) legend, but is here

portrayed in many unmistakable forms as a lasting record in stone. This "Displacement" figure, (286, 1022, p. 2) is said to supply nine different astronomical values with the accuracy of modern astronomy and to account for the difference from the theoretical dimensions of the Pyramid's base as compared with the dimensions actually found in the recent Government Survey.

Chapter III refers to the internal passage system as a graphical exposition of gravitational astronomy confirming the external proofs. The application of the zero date for prophecy is brought out in its relation to modern astronomic facts.

Chapter IV shows how the Pyramid records synchronise with the secular writings of Egypt, Babylon and Israel. The idea in the author's mind is that a highly cultured race "in the image of God" was cradled more than 6,000 years ago "somewhere in Central Asia", and driven by economic facts out of Eden into the then populated centres of a lower culture. Thence they dominated the races they met, either as priests or kings, and retained much of the semi-divine knowledge of their early existence. Their wanderers left relics of their culture in the widest latitudes—Britain, Africa, and even America, but the race gradually became extinct and with it the knowledge and civilisation which was admitted as extant in Moses' time among the Priesthood.

The author brings many cross facts to confirm his reasoning, and has since brought out a further volume ("A connected history of early Egypt, Babylonia and Central Asia") on this aspect of the problem.

In this respect his views are curiously strengthened by Sir Aurel Stein's explorations in "Tekla Makan" the ancient Kashmir valley of Central Asia, and by Waddell's enquiries into early Sumer Aryan language and civilisation in Syria.

The fifth chapter identifies the first eleven chapters of Genesis, and the records of the early Egyptians, as one and the same story, and classifies the various names such as Seth and Enoch as dynasties having their exact counterpart in early Egyptian King Lists. Then follows a very careful comparison of dates both past and future by the different interpretations, secular, allegorical and astronomical, painting in the circumstantial conditions of the various epochs.

Such is the scope of Davidson's rather imposing work, but with it all one feels that an author with the serious grasp of his subject

shown, ought to be able to put forward a more convincing story. Even a table of contents would be valuable, but at present the reader flounders through an impossible maze of facts, and cannot see the wood for the trees. This is as stated less noticeable in the *Morning Post* edition in October 1927.

Points in Favour.

Now to discuss some of the main features said to support a super-human origin of the Pyramid.

(a) The site was ten miles from the quarry, and according to Herodotus, this involved 100,000 workmen, relieved quarterly, for ten years' work bringing the five million tons of limestone, and the granite blocks from Syene, 500 miles up the Nile. Many of the latter weighed over 60 tons, and had to be raised hundreds of feet to be placed in position to support the roof of the King's Chamber.

(b) The structure of the Pyramid is clearly proved to give in its dimensions, trigonometrical and integral functions the following facts:—

(i) The solar, sidereal and anomalistic (date between equinoxes) years, to decimals of a minute.

(ii) The mean sun distance 92,996,825 miles as against the latest astronomical figure 92,998,000.

(iii) The value of "II" to six places of decimals.

(iv) The formula for the annual rate of the precession of the equinoxes for the Pyramid datings 4699 B. C. (Zodiac Zero) to 2045 A. D.

(v) The English inch, originated in Anglo-Saxon civilisation, and the Hebrew cubit.

(c) The orientation with exact reference to Alpha Draconis, the Pole Star in 2144 B. C., the date of construction, as confirmed by other features.

(d) The absence of hieroglyphics or inscriptions as found in every other ancient monument of the sort in both the Old and New worlds and the strange and unaccountable construction of the passages.

The interpretation put on these passages by Pyramid scholars is too plausible to be lightly dismissed.

ABP is said to represent the natural moral destiny of man—to the bottomless pit at P. BE is represented as the narrow progress of the Jews from the date of the Exodus (at B) to the death of Christ at E, when a larger and broader period of progress commences. The zero

date of calculations is the junction of the line M.O.E.B. with the extension of the side of the Pyramid into the ground. This date, at an inch to a year, is 4000 B. C. The huge blocks of pink granite in which these measurements are preserved, are so carefully cut, with the precision of watch-making, that it is difficult even to see the joints.

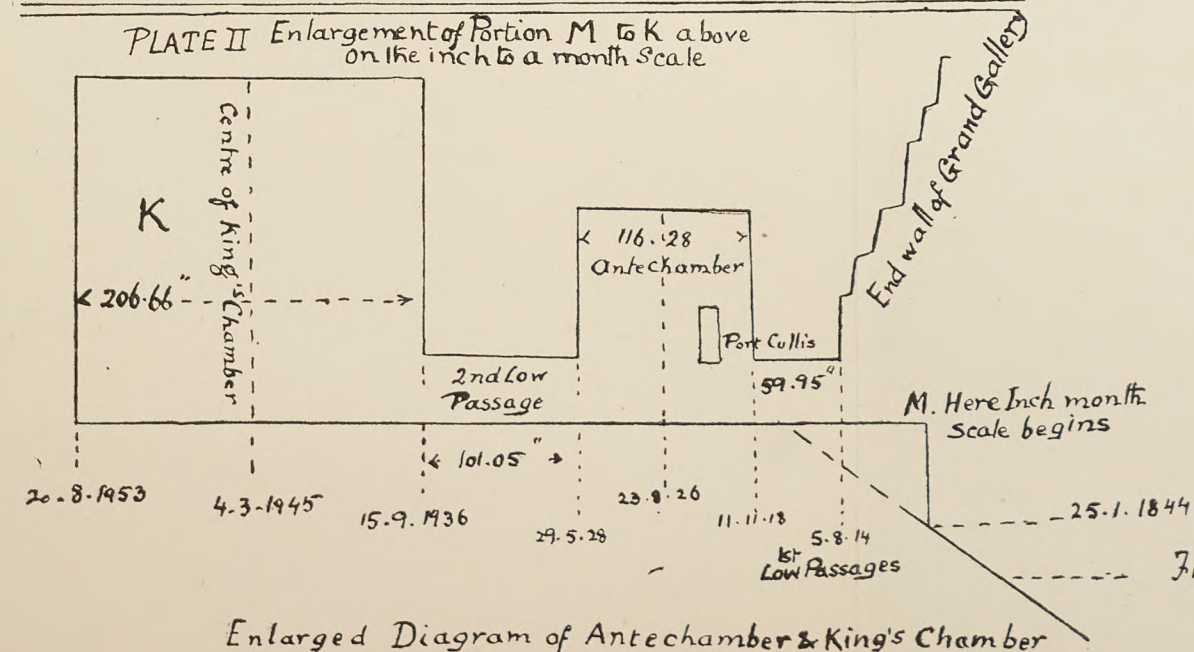
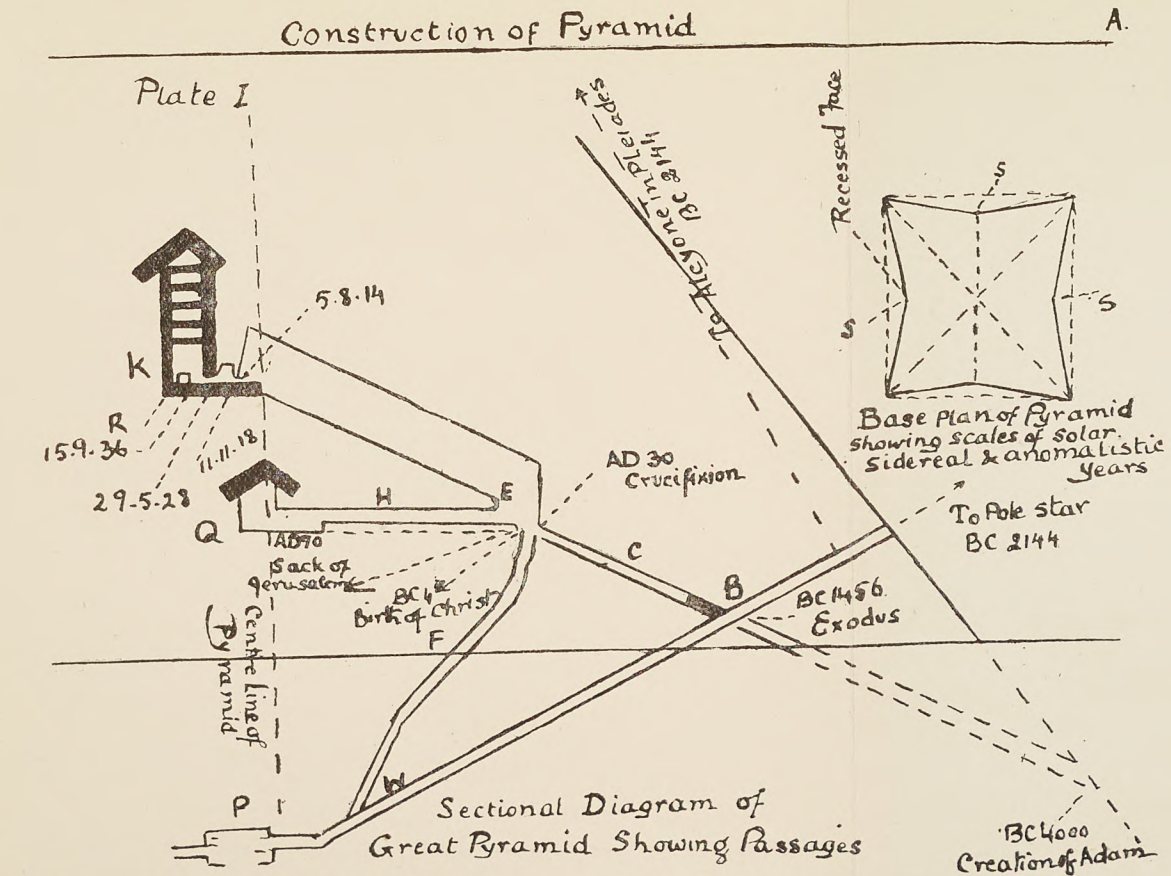
On the same inch to a year measurements, the great step at N is dated 1844, the beginning of the "time of the end". Thenceforward the inch represents to a month, dating on the month scale from August 1909.

The pros and cons.

These are a few dates. There are others, such as would be selected by a historian when picking out salient points in Messianic history. It is of course only possible to prove those after the event, but it is at the same time difficult for even the sceptic, if fair-minded, to bear out the thesis that all the dates so found have been worked up to fit in with the known facts; and even if the most plausible intersections of ordinates, perpendiculars and normals have been cooked, the coincidences are too numerous and too striking.

There are certain indications that the Pyramid's allegory, if it has any signification at all, refers to the period 1844 A. D. to 2045 A. D. and it is urged by the enthusiasts that the important part of this period, from August 1909 to August 1953 would naturally have an enlarged scale, in the same way as a map of England would give an enlarged plan of London. This point of view is nothing if not specious, and is sufficiently plausible to justify provisional acceptance as a basis of argument.

The various passages, which are very exactly described under the allegorical names in the Egyptian sacred books, are all inter-connected. This specially applies to F. Q., symbolising Jewish progress after B. C. 4, the date of the birth of Christ. It was this date of the birth of Christ, confused in Egyptian writings with the passion of Osiris, which led astray investigators like Piazzi Smith in the Sixties. The error of four years in this basic date (as known in those days) deprived the Astronomer Royal of Scotland of all the convincing date intersections which have lent such interest to the investigations of to-day. It is noticeable that perpendiculars upwards from definite constructional points in this (Jewish) passage, coincide with other definite points on the "Christian" records, e.g., the date of Allenby's entry into Jerusalem on 11th December 1917. In this connection it



- A. Entrance (symbolising beginning of Story).
- B. Granite plug blocking ascending passages (till the prescribed date of disclosure).
- C. Ascending passage. (Hall of Truth in Darkness).
- E. Commencement of Grand Gallery, and Birth of Christ.
- F. Well passage (Post building examination).
- G. Grand Gallery (Christianity). "Hall of Truth in Light".
- H. Horizontal passage to Queen's chamber. (Path of Jewry).
- K. King's chamber (the goal of the Story).
- M. Great step. Change of dating.
- N. Anti-chamber with granite. "The truce in chaos".
- P. The pit. Mortality of unguided.
- Q. The Queen's chamber. The goal of Jewry.
- R. The Coffin. "The open tomb".
- S. Constructional hollows "giving lengths of the various years".
- W. Well. (Post building examination).

is significant that Dr. Grattan Guinness, writing in 1878, and working on biblical prophecy, predicted this year 1917 as an important year for the Jews and the end of the Ottoman Empire.

It is also either convincing or represents a very remarkable ingenuity in interpretation, that the various morals and co-ordinates to the various surfaces in the passages, whether ceiling or floor, do indicate various dates on the inch scale, in nearly every instance of definite import in the Christian Era. In other cases integration of the various functions produces coincidences of datings and confirmations of other dating which are often too surprising to be accidental, even to the sceptic, and even with the full knowledge that the integral calculus is a development yesterday.

The problem as a whole.

It is of course quite impossible in a short review of this sort to do more than touch the fringes of a very big subject on which a great deal has been written. There is no doubt, however, that to the man with an enquiring and a mathematical mind there is much food for thought. Enquiry cannot fail to convince the student of a very advanced pre-historic civilisation, but whether the facts indicate prophetic symbolisms and divine revelations is a matter which each must judge for himself. It is very difficult to account for all the scientific disclosures and dates of coincidence on purely human agency, and the attempt seems worthy of some of our foremost scholars.

Bibliography.

The following works in connection with the subject may repay study:—

Sir Flinders Petrie.

Pyramids and temples of Gizeh.

Royal Tombs of the first Dynasty.

* Historical studies.

History of Egypt.

Ancient Egypt.

Basil Stewart.

The witness of the Great Pyramid.

Edgar.

* Great Pyramid Passages.

Marshall Adams.

Book of the Dead.

Those marked * are of special importance.

NAPOLEON.

By

EMIL LUDWIG.

(Messrs. G. P. Putman's Sons, London, 1927) 21s.

This is a life of Napoleon written from rather an unusual aspect. It gives his inner life and thoughts in considerable detail, only touching briefly on his great military campaigns and victories. The book, however, is of great interest to the student of military history, in that it gives a vivid picture of the habits, thoughts and methods of work of the great soldier.

The description of his last years at St. Helena are particularly interesting—a pathetic end for the conqueror of half Europe, cooped up on the rocky unhealthy island and surrounded by the rather unnecessarily severe restrictions and bounds imposed by the governor.

The book leaves one with an increased impression of his wonderful capacity for work—his endurance to every form of fatigue and hardship combined with curious weaknesses for so great a character.

He was inclined to be theatrical and over introspective and he allowed his position as the greatest ruler in Europe to go to his head and warp his military judgment. His Moscow Campaign was an example. One could never have imagined him, earlier in his career, undertaking such a campaign in a barren country with such inadequate supply arrangements, nor, once having arrived at Moscow, with the supply arrangements even more uncertain and winter approaching, can one understand his long delay there doing nothing, which had such disastrous consequences.

He promoted by merit alone with the exception of his own relatives to whom he gave thrones and riches in profusion even though he knew them to be incompetent and worthless.

Things might have gone very differently with him had he chosen his underlings with greater discrimination.

The book is of the deepest interest to all students of the Napoleonic period both from a military and a political standpoint.

FIELD-MARSHAL SIR HENRY WILSON, BART., G.C.B., D.S.O.,
HIS LIFE AND DIARIES, VOLS. I AND II.

By

MAJOR-GENL. SIR C. E. CALLWELL, K.C.B.

(Messrs. Cassell & Co., Ltd., London, 1927) £ 2. 2s.

A great deal has been written about this book during the short time which has elapsed since its publication and the opinion of most

reviewers has been that it is a very great pity that the book has been published at all as its effect is to diminish the reputation of one of the leading British soldiers of the Great War.

The book is published in two volumes and consists largely of extracts from the Field-Marshal's private diary which he kept up ever since his time as a student at the Staff College.

It contains much that he would certainly have cut out had he been editing the book himself, and it is these portions of somewhat fulsome self-praise and belittlement of others in high places, both military and political, which make the book in some ways an unfortunate one. Much of it is, however, of extraordinary interest to the military student; particularly that portion which deals with Sir Henry Wilson's invaluable work at the War Office as Director of Military Operations before the Great War. The Nation can never be sufficiently grateful to him for his wonderful work in perfecting the mobilisation arrangements of the British Expeditionary Force and in establishing a working arrangement with the French General Staff, without which our effective co-operation in the opening stages of the war on the western front could never have been accomplished. The foresight, drive and persistence which he then displayed as a comparatively junior officer were truly remarkable.

During the war itself he came to the front rather as a political than a fighting soldier and his year in command of a corps was not a very successful one.

The latter part of the book describing the last years of his life when, as C. I. G. S., he was mainly concerned with the Irish question, which had naturally always been of such intense interest to him.

At the time of his death it appeared that a distinguished political career might be before him as a member of the House of Commons.

He was undoubtedly one of the outstanding personalities of the Great War and the interesting story of his life will be very widely read.

JOURNAL OF THE ROYAL ARTILLERY.

January 1928.

Included in this volume is a very convincing argument on the merits of H. E., in comparison with shrapnel, by Captain Benfield, R. A. The writer sets out to prove that although at the beginning of the war, when massed infantry attacks were the order of the day, shrapnel may have been the more destructive. Under present day

conditions, when the nature of the target has changed to the widely dispersed pin-points of machine guns, light guns and mortars, all under some sort of cover, suitable targets for shrapnel have become the exception.

The truth of Captain Benfield's assertion is difficult to disprove—especially when the more vital targets may consist, in the future, of swiftly moving armoured machines.

Another good article is that by Colonel Howard on "The Impatience of an Infantryman", Colonel Howard believes that, in normal warfare, there is now no place for the unarmoured soldier and that our infantry divisions will merely play the rôle of rather helpless spectators while the armoured forces fight out the issue—perhaps two or three hundred miles away. This is a very controversial subject. Colonel Howard's article, which ends with the words, "If the reasoning and conclusions in this article are wrong it would be of interest to be told where they fail", is so concisely and convincingly put that it is difficult to say where his conclusions are wrong or his reasoning unsound.

The last article in this volume "A Beginner After Big Game" by Lieut. Hendley, shows that the fascinating sport of big game shooting is still available at moderate expense in India if one takes the trouble to make a *bandobast*, has plenty of energy, and a little luck.

COMMERCIAL AIR TRANSPORT.

BY

LIEUT.-COLONEL I. V. O. EDWARDS, C. M. G.

AND

F. TYMMS, M.C., A.F.R. Ac. S.

(*Sir Isaac Pitman & Sons, Ltd., London 1926*) 7s. 6d.

The wrapper of this book, being like all wrappers, an optimist, states that the book is "Invaluable to the business man and as a text book for the examinations of the Institute of Transport". In our opinion the achievement of these two objectives in one volume is incompatible, and while acknowledging the value of the work that the joint authors have produced, we cannot help feeling that they have at times forgotten just what the purpose of the book really is. In places it is fairly technical—for example the chapter on Air Navigation, not technical enough though, we feel, for the student and too technical,

for the business man, who doesn't want to know how the pilot gets the machine from A. to B., but merely that he does arrive safely at B.

However, in the main, the authors have produced much matter that is both useful and instructive and which should prove of value to India at the present time where there is much talk of inaugurating Air Services.

The book opens with a chapter on the early history of flight : it is suggested that this might have been confined to a history of air transport since the war, this being the object of the book, and then goes on to discuss the question of subsidy. This chapter is interesting, in that it shows the various evolutions through which the Government subsidy to Imperial Airways has past. The writers, we are glad to see are opposed to the principle of the subsidy, but agree that it is essential until air transport has found its feet. With these sentiments we heartily agree.

The next problem to be tackled is that of State *versus* private operation : this is a vexed question which concerns other forms of transport than aircraft and if the economic facts are faced, which they very often are not, there can be no doubt that private operation holds out every advantage, an opinion which the writers appear to share. Information is given in regard to the legislation in force connected with International flying and as the authors state, although much progress has been made, until all States have signed the International Air Convention, the position cannot be really satisfactory. A short, but useful, chapter on the General Principles of Air Transport is followed by one in which the Basic Principles are discussed.

The point is made that until night air services become a recognized part of the organization of Air Transport, difficulties will always be found in competing with existing ground services and true economy of operation will not be achieved.

Valuable information in regard to the economic factors is given, the point being stressed that improvement in the performance of aircraft must be regarded as one of the chief factors in reducing running costs. Ground organization, Wireless and Meteorological services and traffic control are briefly sketched, followed by a semi-technical note on Air Navigation, which, as we have already stated, seems superfluous, or perhaps should have been written in another way ; as it stands it does not achieve either of its objects.

The chapter on Night Flying is excellent and much information in regard to the organization and operation of night air services is included.

The three chapters which follow go into considerable detail of existing airways, the carriage of passengers, freight and mail and the issue of licenses. Many useful tables and statistics are given, which should be very helpful to new companies in framing their estimates and making their plans generally.

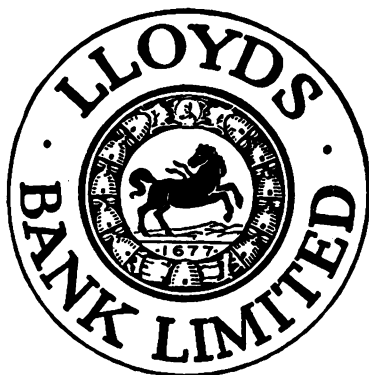
In discussing the types of aircraft and engines best suited to the requirements of air transport the authors conclude that the days of the wooden machine are numbered and that all metal aircraft will be the ultimate development. The merits and demerits of flying boats and seaplanes are discussed and the point made that, a sea route is very much cheaper to prepare and maintain than a land route, although the increased initial cost of sea-going craft is far higher than that of aeroplanes.

The financial conclusion which the authors reach is that "the development of aircraft for purposes of air transport in the near future lies in large monoplanes of all metal construction, fitted with three or more radial air-cooled engines". We think this is a conclusion with which many people will agree.

The book ends up with Notes on Technical Development, the use of aircraft for air survey and other work not included in air transport, and ends on an optimistic note as regards the future.

The writers believe that commercial air transport will come into its own before very long : that it is still in a state of comparative infancy : that the airship will play a big part in future development and that the airship and the aeroplane will be complementary to one another.

These conclusions are perfectly sound as indeed is most of the matter in this small volume, which can be recommended to all who take an interest in this subject, so full of vast possibilities and likely to be so vital to the future of the British Empire.



(Incorporated in England.)

HEAD OFFICE : LONDON, E. C. 3.

EASTERN DEPARTMENT :

14, KING WILLIAM ST., LONDON, E. C. 4.

CAPITAL—

SUBSCRIBED	..	..	£ 73,302,076
PAID UP	..	..	£ 15,810,252
RESERVE FUND	..	..	£ 10,000,000
DEPOSITS, &c. (31-12-27)	..	..	£ 358,657,619

OVER 1,700 OFFICES IN ENGLAND AND WALES.

BRANCHES IN THE EAST :

Bombay, Calcutta, Karachi, Rangoon, Delhi, New Delhi,
Simla, Rawalpindi, Murree, Srinagar (Kashmir),
Gulmarg.

GENERAL BANKING AND EXCHANGE business of every description transacted, including the issuing of **WORLD LETTERS OF CREDIT** payable throughout the World. **SAVINGS BANK ACCOUNTS** opened at any of the Bank's Branches in India or Burmah which are **WITHDRAWABLE BY CHEQUE**. Particulars on application.

Thos. Cook & Son, Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Passages engaged by all lines at same fares as charged by Steamship Companies. Holders of Cook's tickets met at all ports. Outward passages engaged and tickets supplied from any part of the world to India. Usual reductions obtained for Missionaries, Railway Officials, Families, etc.

Baggage received, stored and forwarded. Cargo shipped to all parts of the world at current rates. Inward consignments such as Hardware, Piecegoods, Machinery Stores, etc., for Messes and Clubs, cleared and forwarded at special rates. Insurance of all kinds effected on Baggage, Cargo, Livestock, Mess Property, etc.

The Oriental Traveller's Gazette containing sailing dates and fares of all steamers, together with invaluable information for travellers, sent post free on application.

Government Certificates accepted. No deposit required.

Thos. Cook & Son (Bankers), Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Current and Fixed Deposit Accounts opened. Interest allowed. Pay and Pensions collected. Periodical remittances made at current rates. Insurance premia paid.

Letters of Credit and Traveller's Cheques issued, encashable throughout the world.

Drafts granted and Telegraphic Transfers effected on all principal towns.

Insurance Life, Accident, Fire, Burglary, effected. Prospectus on application.

160 OFFICES THROUGHOUT THE WORLD.

EASTERN OFFICES : BOMBAY, BAGHDAD, DELHI, SIMLA, CALCUTTA, RANGOON, MADRAS, COLOMBO, SINGAPORE.



E. DUCKETT & Co

[By GOVERNMENT APPOINTMENT]

EAST STREET POONA

MONUMENTAL SCULPTORS

POWER MACHINERY & TOOLS

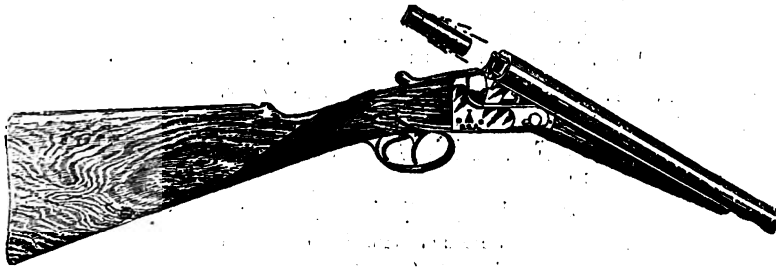
**ARTISTIC MEMORIALS IN SELECTED
MARBLE ERECTED ANYWHERE IN INDIA**

ELAHEE BUKSH & Co.,

ARMS AND AMMUNITION DEALERS,

== MEERUT AND KASHMERE GATE, DELHI ==

By Special Appointment



To H. E. the Earl of Reading, Viceroy & Governor-General.

LARGE STOCK OF

**Latest Model Shot Guns, Rifles, Pistols, Revolvers
and Ammunition.**

CHEAP AND RELIABLE

Shot Gun Cartridges ! A Speciality !! Record Sale !!!

Illustrated Catalogue Free.

A useful compendium of information for all who have interests in Asia.

£ 1

ASIATIC REVIEW

5s.

per annum

per issue.

Each issue contains nearly 200 pages and is generally illustrated.

THE VERDICT OF THE PRESS.

ENGLAND. *The Times*: "The January issue brings that quarterly to the fortieth year of its steadfast devotion to the mission of providing a platform for information and opinion on Asiatic affairs—political, social, literary, educational, commercial, artistic and general.....many eminent names appear in the list of contributors."

U. S. A. *New York Tribune*: "A well-informed quarterly dealing with Oriental affairs."

FRANCE. *Les Dernieres Nouvelles* (Strasbourg): "La grande revue de Londres."

INDIA. *Bombay Daily Mail*: "Of special interest as affecting existing trade relations."

The following articles on India were published in the Review during 1927:—

India at the Imperial Conference by THE MAHARAJA OF BURDWAN.

The Indian Co-operative Movement, by Sir LALUBHAI SAMALDAS.

Rural India and the Royal Commission, by Sir PATRICK FAGAN.

*Post and Telegraph Work in India, by Sir GEOFFREY CLARKE.

*Indian Forest Administration, by W. F. PERREE.

*India's Cotton Problem, by H. A. F. LINDSAY.

*The Indian Navy, by P. R. CADELL.

*Lectures delivered before the East India Association.

THE REVIEW PUBLISHES IN FULL

THE PROCEEDINGS OF THE EAST INDIA ASSOCIATION.

NEW FEATURES:—

1.—THE ASIAN CIRCLE.

A SURVEY OF ASIATIC AFFAIRS.

(Published by arrangement in the *Asiatic Review*).

THE ASIAN CIRCLE is conducted by a group with personal knowledge of the various parts of Asia, and through the collective experience of its members aims at giving to the public an informed, progressive, and disinterested view of Asian affairs, both in detail and as a whole. Its membership includes:

The Right Hon. LORD MESTON, K. C. S. I. (President).

Sir GEORGE BOUGHEY.

Sir PATRICK FAGAN, K. C. I. E., C. S. I.

Sir JOHN CUMMING, K. C. I. E., C. S. I.

Lieut.-General Sir GEORGE MACMUNN, K. C. B., K. C. S. I., D. S. O

2.—NETHERLANDS. (INDIES SECTION)

ARTICLES by expert writers on Java and Sumatra.

3.—FRENCH COLONIES.

Special contributions concerning Syria and Indo-China.

4.—THE INNER EAST.

Record of Events in Central Asia).

How to obtain *THE ASIATIC REVIEW*.

(41st year of Publication).

Please use this **SUBSCRIPTION ORDER FORM**

To EAST AND WEST, LTD.,

3, Victoria Street, London, S. W. 1.

Please send *THE ASIATIC REVIEW* for Twelve Months, beginning

with.....to.....

for which I enclose equivalent of £1 (One Pound Sterling).

(Please write full name and address distinctly).

By Appointment to
THE LORD IRWIN,
VICEROY & GOVERNOR-GENERAL
OF INDIA.



By Appointment to
H. M. THE KING.

By Appointment to
H. R. H. THE PRINCE OF WALES.

RANKEN & Co., Ltd.,

SIMLA, DELHI, LAHORE,
RAWALPINDI & MURREE.

ESTABLISHED IN CALCUTTA 1770.

CIVIL & MILITARY TAILORS,
GENTLEMAN'S OUTFITTERS,
AND BREECHES MAKERS.

ESTIMATES SUPPLIED FOR
FULL-DRESS AND MESS DRESS
UNIFORMS OF ALL REGIMENTS.

By Appointment to
H. E. Field Marshal Sir William R. BIRDWOOD, Bart.,
G.C.B., G.C.M.G., K.C.S.I., C.I.E., D.S.O.,
Commander-in-Chief in India.

**MILITARY OFFICERS THROUGHOUT INDIA ARE
INVITED TO OBTAIN FULL PARTICULARS
REGARDING**

PASSAGES

**IN ACCORDANCE WITH THE
LEE COMMISSION SCHEME**

FROM

**COX AND KING'S
(AGENTS), LIMITED,**

BOMBAY,

**WHO ARE RECOGNISED BY GOVERNMENT AS
AGENTS THROUGH WHOM SUCH PASSAGES MAY
BE ENGAGED.**

**IF YOU ANTICIPATE LEAVE DURING
1928**

REGISTER YOUR REQUIREMENTS NOW

MESS PRESIDENTS

**DESIROUS OF INSURING REGIMENTAL PLATE AND
TROPHIES SHOULD WRITE TO COX & KING'S,
WHO WILL GIVE EXPERT ADVICE.**

INSURE YOUR HORSE.

**Leave your BAGGAGE in charge
OF**

COX AND KING'S

Good! It's British!



If the name Eley or Kynoch is stamped on the head of a cartridge you may be sure that it will accomplish all that a cartridge is expected to do.

It will kill its bird, be comfortable in use, will eject easily and will not damage your gun. In a word Eley and Kynoch cartridges are dependable.

The "Grand Prix" is loaded with Smokeless \diamond Diamond the most popular powder in the world. The "Gastight" is obtainable loaded with Smokeless \diamond Diamond powder or any of the following high grade powders: B.C., Empire, Schultze or Amberite.

Don't use inferior cartridges in your gun—
Use **ELEY OR KYNOCH. BRITISH and BEST**

OBTAINABLE FROM ALL DEALERS

Wholesale only: NOBEL INDUSTRIES LTD.,
A subsidiary company of Imperial Chemical Industries Ltd.
NOBEL HOUSE, BUCKINGHAM GATE
LONDON, S.W.1



These cartridges are loaded with high grade British smokeless powders.

MAPS PUBLISHED BY THE SURVEY OF INDIA

Are obtainable from the Map Record and Issue Office, 13, Wood Street, Calcutta, on the Public Service—on Cash Payment or Book Transfer, and, for private use, on Cash Payment or V. P. P.

Forest maps are obtainable only from the Officer-in-Charge, Forest Map Office, Dehra Dun.

Geological maps are obtainable from the Director, Geological Survey of India, Calcutta.

The Survey of India publish maps for the greater part of SOUTHERN ASIA between the meridians of 44° and 124° East of Greenwich and between parallels 4° and 44° north latitude.

2. Surveys executed after 1905 are classed as "MODERN," those PRIOR to that date are classed as "OLD."

3. Maps are printed in two styles or editions, *viz.*, LAYERED and POLITICAL:—

(a) The LAYERED edition represents a map printed in colours with graduated layer tints of colour to show altitudes, and, shading to emphasize the hills. This edition gives prominence to the physical features.

(b) The POLITICAL edition represents a map printed in colours, but without graduated layer tints. Hills are represented by contours and shading. This edition gives prominence to the Civil Divisions of India which are shown by ribands of colour along boundaries of administrative partitions.

NOTE.—When maps are printed in colours, from mixed or old surveys the edition is styled "PRELIMINARY," and when published in black only or with hills in brown, the edition is styled "PROVISIONAL ISSUE."

4. The series of Modern maps are grouped under three Divisions:—

(I) GEOGRAPHICAL, embracing—

(a) SOUTHERN ASIA SERIES, scale 1 : 2,000,000 or nearly 32 miles to 1 inch in LAYERED and POLITICAL editions, size 36 inches \times 24 inches, price Rs. 6 per copy for the Layered and Rs. 3 per copy for the Political edition.

(b) INDIA AND ADJACENT COUNTRIES, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED and POLITICAL editions, or if from old surveys as PRELIMINARY EDITIONS; size 24 inches \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy.

(c) INTERNATIONAL MAP OF INDIA, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED edition (without shading of hills), size 30 inches \times 26 inches, price Rs. 3-0-0 per copy.

(II) TOPOGRAPHICAL, comprising maps on:—

(a) SCALE 1"=1 MILE in the POLITICAL edition, size 24 \times 19 inches, price Re. 1-8-0 per copy.

(b) SCALE 1"=2 MILES in the POLITICAL edition, size 24 \times 19 inches, price Rs. 3 per copy.

(c) SCALE 1"=4 MILES in the LAYERED and POLITICAL editions, size 24 \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy, and from old surveys as PROVISIONAL ISSUES, price Re. 1 per copy.

NOTE.—Index charts or Key maps to the Geographical and Topographical series are obtainable gratis.

(III) GENERAL MAPS which include:—

(a) GENERAL MAPS OF INDIA, scale 32 miles to 1 inch, in sets of 12 sheets, each sheet 25 \times 33 inches, in LAYERED and POLITICAL editions, price Political edition, Rs. 12 or Layered edition, Rs. 24 per set. Various maps of India on the same and smaller scales and miscellaneous special maps illustrating Railways, etc.

(b) PROVINCIAL MAPS, on scales 16 miles and 32 miles to 1 inch.

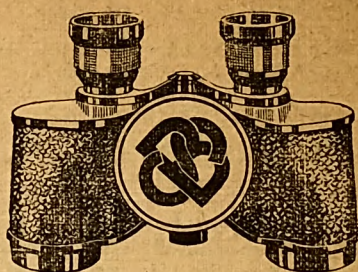
(c) DISTRICT MAPS, on scales 4 miles and 8 miles to 1 inch.

(d) CANTONMENT AND TOWN MAPS AND OTHER MISCELLANEOUS MAPS, of various scales and prices.

5. MAPS CATALOGUES can be obtained at ONE RUPEE per copy, postage $\frac{1}{2}$ extra.

6. Maps can be mounted on cloth and folded or mounted on rollers for hanging, etc., at an extra charge.

7. The prices quoted for various maps are exclusive of postage and V. P. P. charges. Any further information may be obtained free of charge from the Officer-in-Charge, Map Record and Issue Office, 13, Wood Street, Calcutta.



BARR & STROUD
BINOCULARS
NONE BETTER---AND THEY'RE BRITISH
SHARP DEFINITION
LARGE FLAT BRILLIANT FIELD
PRISMATIC BINOCULARS.

Type.	Magni- fication.	Focussing.	Diameter of Objective.		Angular Field.	Field of View in yards at 1,000 yards.	Price.
			Ins.	m/m.			
C. F. 1	6	Central	0.9	23	8°	138	£6 10 0
C. F. 2	6	Central	1.2	30.5	8°	138	£8 2 6
C. F. 3	6	Eye-piece	0.9	23	8°	138	£6 0 0
C. F. 4	6	Eye-piece	1.2	30.5	8°	138	£7 7 6
C. F. 8	8	Central	1.2	30.5	7°	122	£9 10 0

GALILEAN BINOCULARS.

Type.	Magni- fication.	Diameter of Objective.			Inter- ocular Diameter.	Angular Field.	Field of View in yards at 1,000 yards.	Price.
		Ins.	m/m.	Lines.				
C. A. 2	3½	2.19	55.6	26	65 mm.	61°	112	£2 17 6
C. A. 3	3½	2.0	50.8	24	63.5 mm.	61°	112	£2 12 6
C. A. 3	3½	2.0	50.8	24	62 mm.	61°	112	£2 12 6
C. A. 4	3½	1.75	44.5	21	63.5 mm.	61°	112	£2 7 6
C. A. 4	3½	1.75	44.5	21	62 mm.	61°	112	£2 7 6

Prices include leather cases and straps.

Send for free booklet J "On Binoculars."

BARR & STROUD LTD., ANNIESLAND, GLASGOW and 15
VICTORIA ST., LONDON, S. W. I.

Telegrams—
Telemeter, Glasgow.

Codes—
5th and 6th Edition, A. B. C.

Telegrams—
Retemelet, London

The JOURNAL of the UNITED SERVICE Institution of INDIA

CONTENTS.

Editorial.

1. Narrative of Operations of the 11th Cavalry Brigade in Iraq, from 23rd October to 3rd November 1918, by Lieut.-General Sir Robert A. Cassels, K.C.B., C.S.I., D.S.O.
2. An attempt that failed, by "K. G."
3. A hundred years of Himalayan Exploration—A lecture, by Major K. Mason, M.C.
4. Common faults in Order writing, by Captain O. G. Body, D.S.O.
5. The effect of the Machine Gun Company on the tactical handling of a Battalion, by Colonel A. H. C. Kearsley, D.S.O., O.B.E.
6. Vocational Training in the Army at Home, by Lieut. W. G. I. M. Etherington, M.B.E.
7. The Experimental Armoured Force—A lecture by Captain A. B. Knight, M.C.
8. Some notes on air matters affecting India, by Squadron-Leader E J Hodshil.

Military Notes.

Correspondence.

Reviews.

Printed by E. A. Smedley at
The Civil & Military Gazette Press, Lahore
And published by Major J. G. Smyth, for the United Service
Institution of India, Simla
Price Rupees 2-8-0.
[All Rights Reserved.]

UNITED SERVICE INSTITUTION OF INDIA.

Rules of Membership.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Auxiliary Force, India, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members, the members of the Diplomatic Corps, foreign, naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—

Rupees 120+entrance fee (Rs. *10)=Rs. 130.

Ordinary Members of the Institution shall be admitted on payment of an entrance fee of Rs. *10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Members receive the Journal of the Institution, post free anywhere.

Members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and Library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Sergeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 10.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution, on or after the 1st October, will not be charged subscription until the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

*Rs. 7 in the case of British Service Officers serving in India.

Contributions to the Journal.

All papers must be typewritten (in duplicate) and only on one side of the paper. All proper names, countries, towns, rivers, etc., must be in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., para. 204, and King's Regulations, para. 509.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

To

THE SECRETARY,

UNITED SERVICE INSTITUTION OF INDIA, SIMLA.

Dear Sir,

I desire to become a Life
Ordinary Member of the United Service Institution of India, and since I understand that no election is necessary in my case, I have filled in the Bankers' order form below.

Yours faithfully,

Name _____

Corps _____

Permanent address _____

Present address _____

Bankers' Order Form.

(Bankers) Messrs. _____

On receipt of this order, please pay to LLOYD'S BANK, COX'S AND KING'S BRANCH, SIMLA, for the UNITED SERVICE INSTITUTION OF INDIA, the sum of Rs. _____, being (* Entrance Fee and) Subscription, and the sum of Rs. 10-0-0 every succeeding January until further notice.

Ordinary Members.

		Rs.	a.	p.
* Entrance Fee	..	10	0	0
Annual Subscription	..	10	0	0
Total	..	20	0	0

Signature _____

Date _____

Life Members.

		Rs.	a.	p.
* Entrance Fee	..	10	0	0
Subscription	..	120	0	0
Total	..	130	0	0

* Rs. 7 only in the case of British Service Officers serving in India.

MILITARY WIDOWS' FUND, —— BRITISH SERVICE ——

THIS FUND enables a British Service (Army) officer, by subscribing from Rs. 6 to Rs. 10 per quarter, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 8,775	to	Rs. 12,375
For each child	„ 750	to „	1,125

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription and the sum for each child varies with age of child. Subscriptions are based on the rank of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer, but not in excess of 4 years.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return Home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Headquarters, Simla.

For admission and rules apply to :—

The Secretary,
MILITARY WIDOWS' FUND,
Army Headquarters, Simla.

DR. BARNARDO'S HOMES.

In the absence of the President, H. R. H. the Duke of York, Mr. William McCall, Chairman of the Council, presided over the **ANNUAL GENERAL BUSINESS MEETING** of Dr. Barnardo's Homes, National Incorporated Association to-day.

The Report showed that up to the 31st December last, 104,156 children had entered the Homes. 17,915 children and young people were dealt with during the year.

The new admissions in 1927 totalled 2,025, 1,648 being permanent admissions and 377 temporary. Nearly 80 per cent. of the children came from the Provinces and a little over 20 per cent. from the Metropolis. On an average 5 children come in daily. The children were admitted from almost every county in the Kingdom through the various ever-open doors which are open for the reception of destitute children at any hour of the day or night. The average number of children in residence throughout the year was 7,716. Included in this large family were 1,203 babies and toddlers under 5 ; 422 crippled, invalid, blind, deaf and dumb, physically afflicted or sick children. 1,087 boys and girls were under industrial and technical instruction in workshops and workrooms. 2,189 young people were placed out during the year, 29,661 had been migrated to Canada and Australia and the Overseas Dominions up to the end of 1927.

The Homes consist of 176 separate cottages, households and Branches all over the Kingdom, in addition to hundreds of boarding-out centres in rural districts.

The Charter of the Homes is " No Destitute Child Ever Refused Admission ". There is no red tape ; no waiting list ; and no voting system. The need of the child is the only consideration. The Homes rescue the Nation's children, nurture, care for and train them, and give them back to the country as useful citizens, healthy patriotic and strong. In other words they are turning C. 3 children into A 1 citizens.

The Home Secretary, presiding over a mass meeting of the Homes last year, speaking as one officially responsible for the inmates of the Industrial Schools and Reformatories of the land, said " I am here to-day to say, and to say to the people of England at large, that there is no better way of decreasing my family and of keeping boys and girls out of the Reformatory and Industrial Schools than by supporting institutions like Dr. Barnardo's Homes. As Home Secretary, I thank God for Dr. Barnardo's Homes ".

The income for the year from all sources, ordinary and special, amounted to £521,514 and the expenditure to £521,499.

Head Offices of Dr. Barnardo's Homes,
18-26, Stepney Causeway,
London, E. I.

United Service Institution of India.

PATRON :

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS :

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the United Provinces.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Governor of Burma.
His Excellency the Governor of the Central Provinces.
His Excellency the Governor of Assam.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

MEMBERS OF THE COUNCIL, 1928-29.

Ex-officio Members.

- | | |
|---|---|
| 1. The Chief of the General Staff. | 8. The Master-General of Supply in India. |
| 2. The Adjutant-General in India. | 9. The Engineer-in-Chief. |
| 3. The Air Vice-Marshal, Commanding
R. A. F. in India. | 10. The Military Secretary. |
| 4. The Secretary, Army Department. | 11. The Director, Medical Services. |
| 5. Sir Denys Bray, K.C.I.B., C.S.I., C.B.E. | 12. The Director, Royal Indian Marine. |
| 6. H. G. Haig, Esq., C.I.E. | 13. The Director, Military Operations,
General Staff, A. H. Q. |
| 7. The Quartermaster-General in India. | |

Elected Members.

- | | |
|--|---|
| 14. Major-General W. M. St. G. Kirke, C.B.,
C.M.G., D.S.O. | 17. Brigadier E. F. J. Hill, D.S.O., M.C. |
| 15. Major-General H. E. ap Rhys Pryce,
C.B., C.M.G., D.S.O. | 18. Major T. C. E. Barstow, C.B.E. |
| 16. Colonel W. R. Blackwell, C.M.G. | 19. Major A. F. R. Lumby, C.I.E., C.B.E. |
| | 20. Squadron Leader E. J. Hodson. |

MEMBERS OF THE EXECUTIVE COMMITTEE, 1928-29.

Elected Members.

- | | |
|---|--|
| 1. Major-General W. M. St. G. Kirke, C.B.,
C.M.G., D.S.O. (President). | 4. Brigadier E. F. J. Hill, D.S.O., M.C. |
| 2. Major-General H. E. ap Rhys Pryce,
C.B., C.M.G., D.S.O. | 5. Major T. C. E. Barstow, C.B.E. |
| 3. Colonel W. R. Blackwell, C.M.G. | 6. Major A. F. R. Lumby, C.I.E., C.B.E. |
| | 7. Squadron Leader E. J. Hodson. |

Additional Members.

- | | |
|---|--------------------------------|
| 8. Colonel E. C. Gepp, D.S.O. | 11. Major H. L. Evans, C.B.E. |
| 9. Colonel M. Saunders, D.S.O. | 12. Captain C. W. Toovey, M.C. |
| 10. Colonel H. F. E. MacMahon, C.B.E., M.C. | |

SECRETARY & EDITOR	..BT-MAJOR J. G. SMYTH, V.C., M.C.
SUPERINTENDENT ..	..SUB-CONDE. J. C. ALFORD.
LIBRARIAN ..	..MISS W. McCORMICK.
BANKERS ..	..LLOYD'S BANK, LIMITED. (Cox's AND KING'S BRANCH), SIMLA.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed inside front cover.
3. The Reading Room of the Institution is provided with all the leading illustrated papers, newspapers, magazines, and journals of military interest that are published.
4. There is a well-stocked library in the Institution, from which members can obtain books on loan free. Books are sent out to members V.-P. for the postage.
5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in any part of the world.
6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found in para. IV, Secretary's Notes.
- 7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.**
8. When temporarily in the U. K., Officers of the Indian Army can join the Royal United Service Institution, Whitehall, for a period of six months on payment of half a guinea, or for a period of one year on payment of a guinea.

United Service Institution of India.

JULY, 1928.

CONTENTS

PAGE.

Editorial	445
1. Narrative of Operations of the 11th Cavalry Brigade in Iraq, from 23rd October to 3rd November 1918...	451
2. An Attempt that Failed	51
3. A Hundred Years of Himalayan Exploration—A Lecture.	513
4. Common faults in Order Writing	525
5. The effect of the Machine Gun Company on the Tacti- cal Handling of a Battalion	538
6. Vocational Training in the Army at Home	546
7. The Experimental Armoured Force—A Lecture	556
8. Some Notes on Air Matters Affecting India.. .. .	576
Military Notes }	587
Correspondence }	679

REVIEWS.

1. The Palestine Campaigns	682
2. The Staff and the Staff College	684
3. On Future Warfare	686
4. Imperial Military Geography, 5th Edn.	687
5. The Future of the British Army	689
6. The Journal of the Society of Army Historical Research, January 1928	690
7. Big Game Shooting in the Indian Empire	691
8. Reputations	692
9. Who's Who, 1928	693
10. Neuve Chapelle—India's Memorial in France	694
11. Polo Pony Training, with Hints on the Game	695
12. The Care of the Dog in India	696
13. Ibn Sa'oud of Arabia	696

I.—New Members.

The following new members joined the Institution from 1st March 1927 to 31st May 1928 :—

ORDINARY MEMBERS.

Captain J. H. Rigg.
 Lieut. R. G. Thurburn.
 Lieut. G. Meynell.
 Lieut. S. J. White.
 Captain Hon'ble R. T. R. P. Butler.
 Captain J. W. Williams.
 Captain A. L. Elsworth.
 Captain H. L. Mostyn-Owen.
 Lieut.-Colonel V. Coates.

Captain R. S. King.
 Captain J. M. Morin.
 Lieut. E. G. Dawes.
 Captain C. E. C. Gregory.
 Lieut. C. C. M. Macleod-Oarey.
 Lieut. H. C. B. Hall.
 Captain W. E. Jackson.
 Captain F. D. S. Fripp.

II.—Examinations.

(a) The following table shows the campaigns on which the military history papers will be set from March, 1928, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii) :—

Serial No.	2	3	4	5
	Date of examination.	Campaign set for the first time	Campaign set for the second time.	Campaign set of the last time
1	March, 1928 ..	Waterloo, 1815 (from the landing of Napoleon in France, 1st March, to the conclusion of operations at Waterloo).	..	Mesopotamia, 1916-17 (as detailed in Army Order 339 of 1925 as amended by Army Order 108 of 1925).
2	October, 1928 ..	Palestine, 1917-18 (from Genl. Allenby's assumption of command, 28th June, 1917, to the conclusion of operations, 31st October, 1918), covered by despatches, dated 16th December, 1917, 18th September and 31st October, 1918, and 28th June, 1919.	Waterloo, 1815 (as given in Serial 1, column 3)	..
3	March, 1929 ..	..	Palestine, 1917-18 (as given in serial 2, column 3).	Waterloo, 1915 (as given in serial 1, column 3).
4	October, 1929 ..	Egypt and Palestine, from the outbreak of war with Germany to June 1917.	..	Palestine, 1917-18 (as given in serial 2, column 3).

NOTE.—With regard to Army Order 363 of 1926, the above campaigns will not be divided into general and special periods.

(b) Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2.—*The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. C. G. Powels).

B.—OTHER BOOKS.

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
 The Revolt in the Desert (T. E. Lawrence).
 Allenby's Final Triumph (W. T. Massey).
 How Jerusalem was Won (W. T. Massey).
 Outline of the Egyptian and Palestine Campaigns, 1914-18
 (Bowman-Maniford).
 L'Attaque du Canal de Suez (Douin).
 Army Quarterly—October 1920 (T. E. Lawrence's article).
 Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T. Atkinson's articles).
 Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's article).
 Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).
 R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's article).
 U. S. I. Journal—October 1923 (Captain Channer's article).

3.—*The Dardanelles Campaign.**Description.*

- | | |
|---|--|
| Naval and Military Despatches .. | A clear account of the operations in detail from the G. H. Q. standpoint. |
| Reports of the Dardanelles Commission. | Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts. |
| The Dardanelles (Callwell) .. | The best account and criticism of the strategic conduct of the campaign. |
| Gallipoli Diary (Sir I. Hamilton) .. | The campaign from the point of view of the C-in-C. on the spot. |
| Life of Lord Kitchener (Arthur) .. | Throws considerable light on Lord Kitchener's direction of the campaign. |
| The Dardanelles Campaign }
(Nevinson).
Gallipoli (Masefield)
The World Crisis (Winston Churchill.) | Well written and picturesque accounts by eye-witnesses.
Explains his part in inception of the campaign. |

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

Soldiers and Statesmen (Field-Marshal Sir W. Robertson). point of view of the
C. I. G. S.

Five years in Turkey (Liman Van Sanders).

Official Account: Official History of the War, Naval Operations, Vols. II and III.

Gallipoli Campaign (Outline of Military Operations). By a Student.

Experiences of a Dugout (Callwell).

Despatches from the Dardanelles (Ian Hamilton).

The Navy in the Dardanelles Campaign (Wemyss).

4.—The Mesopotamia Campaign.

The Campaign in Mesopotamia, 1914-18 (Evans).

Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).

Critical Study of the Campaign in Mesopotamia up to April, 1917.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The World Crisis (Winston Churchill).

Notes and Lectures on the Campaign in Mesopotamia (A. Kearsey).

5.—Waterloo Campaign.

Waterloo Campaign (J. H. Anderson).

Waterloo (Hilaire Belloc).

Wellington and Waterloo (Arthur Griffiths).

Waterloo the Downfall of the first Napoleon (George Hooper).

Campaign of 1815 (W. H. James).

With Napoleon at Waterloo (E. B. Low).

Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).

Waterloo Campaign (S. C. Pratt).

Wellington and Waterloo (G. W. Redway).

Wellington Campaigns. Peninsula-Waterloo, 1808-1815, also Moore's.

Campaign of Corunna (C. W. Robinson).

6.—*The American Civil War.*

Stonewall Jackson and the American Civil War (G. F. R. Henderson).

History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).

History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).

American Civil War (J. H. Anderson).

The 1st American Civil War, 1775-78 (Henry Belcher).

The American Civil War, 1861-64 (John Formby).

History of the American Civil War (J. W. Draper).

Fredericksburg and Chancellorsville (J. E. Gough).

Battles and Leaders of the Civil War (Johnson and Buel).

War of Secession, 1861-62 (G. W. Redway).

7.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

8.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

A Staff Officer's Scrapbook (Ian Hamilton).

German Official Account.

Lectures on the Strategy of the Russo-Japanese War (Bird).

Question on the Russo-Japanese War (Brunker).

Official Account: The Russo-Japanese War (Naval and Military),
3 Vols., published by Committee of Imperial Defence.

Outline of the Russo-Japanese War (Ross).

A Study of the Russo-Japanese War (Chasseur).

My Experiences at Nan Shan and Port Arthur (Tretyakow).

Outline History of the Russo-Japanese War, 1904, up to the
Battle of Liao-Yang, with Questions and Answers (P. W.).

A Short Account of the Russo-Japanese War ("Footslogger").

An account of the Battle of Liao-Yang (with questions and 10
maps for examination purposes) (Bird).

9.—*The Palestine Campaign.*

The Official History of the Great War—Military Operations in
Egypt and Palestine, Vol. I, and Maps (Lt.-General Sir
George MacMunn and Captain Cyril Falls).

The Palestine Campaign (Colonel A. P. Wavell).

An Outline of the Egyptian and Palestine Campaigns, 1914-18
(Major-General Sir M. G. E. Bowman-Manifold).

Official History of Australia in the War, 1914-18, Vol. VII, Sinai
and Palestine (H. S. Gullett).

The Desert Campaign (W. T. Massey).

10.—*Organization of Army since 1868.*

A.—ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue, Vols. I to XL.

Outline of the Development of British Army, by Major-Genl. Sir W. H. Anderson.

Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

* Notes on the land forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1925.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines, viz., R. U. S. I.

Army Quarterly, Journal of the U. S. I. of India, etc.

11.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas, 1917).

The British Empire Series. (XII Volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

* Particularly recommended by the C. I. G. S. for all officers to read.

- Forty-one Years in India (Lord Roberts).
 History of the British Army (Sir John Fortescue).
 General Survey of the History of India. (Sir Verney Lovett).
 Citizenship in India (Capt. P. S. Cannon).
 India in 1926-27. (J. Coatman).
 India (Nations of to-day Series). (Sir Verney Lovett).
- B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.**
 The Rise and Expansion of British Dominions in India (Sir A. C. Lyall, 1894).
 A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).
 The Nearer East (Hogarth, 1902).
 Modern Egypt (Cromer, 1908).
 Egypt and the Army (Elgood, 1924).
 The History of Canada (W. L. Grant).
 Nova Scotia (B. Wilson, 1911).
 Report on British North America (Sir C. P. Lucas).
 The Union of South Africa (R. H. Brand, 1909).
 Short History of Australia (E. Scot).
 History of the Australasian Colonies (Jenks, 1912).
 The English in the West Indies (J. A. Froude, 1888).
 The Lost Possessions of England (W. F. Lord, 1896).
 International Relations of the Chinese Empire (H. B. Mosse).
 (Kelly and Walsh, Shanghai).
 Whats Wrong with China (Gilbert).
 Why China Sees Red (Putman-Weale).
 Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).
 12.—*Military Geography*.
 Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).
 Imperial Military Geography (Capt. D. H. Cole, 1928).
 Introduction of Military Geography (Col. E. S. May).
 Imperial Defence (Col. E. S. May).
 Main Feature of the Japanese and other Pacific Problems.
 (Reprinted from *Morning Post*. Sifton Præd).
 Britain and the British Seas (H. J. Makinder, 1907).
 Military Geography (Macguire).
 Imperial Strategy (Repington).
 War and the Empire (H. Foster).
 Historical Geography of British Colonies (Dominions), 7 Vols.
 (Sir C. P. Lucas, 1906-17)—
 Vol. 1, Mediterranean.
 Vol. 2, West Indies.
 Vol. 3, West Africa.
 Vol. 4, South Africa.
 Vol. 5, Canada.
 Vol. 6, Australia.
 Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

13.—*Foreign Armies.*

OFFICIAL.

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- * Handbook of the Polish Army, 1927.
- * Handbook of the Army of the Kingdom of Serbs-Croats and Slovenes (Yugo-Slavia) 1927.
- * Handbook of the Czechoslovak Army 1927.
- * Handbook of the Swiss Army 1924.

14.—*Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 500 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 509, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet black*. No washes or ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be Taken Away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is now available. Price As. 8 plus postage As. 4.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

	<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1.	The Annual Report of the Smithsonian Institution, 1926. (Presented by the Institution, Washington.)	1927.	..
2.	Military Report on British Somaliland, Vol. II—Routes. (Presented by the War Office.)	.. 1926.	Official.
3.	The Future of the British Army .. (Presented by Messrs. H. F. & G. Witherby, London.)	1928.	Bt. Major B. O. Denning.
4.	Soldiering in India, 1764—1787 .. (Presented by Messrs. William Blackwood & Sons, Ltd., London.)	1928.	W. O. MacPherson.
5.	History of the 3/2nd Punjab Regiment (Presented by the Regiment..)	.. 1927.	Col. H. C. Wylly.
6.	History of the 3/1st Punjab Regiment (Presented by the Regiment.)	.. 1927.	
7.	Artillery To-day and To-morrow. (Presented by Messrs. W. Clowes & Sons, Ltd., London).	1928.	Col. H. Rowan- Robinson.

Secretary's Notes.

BOOKS PRESENTED—(contd.).

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
8. Oude in 1857 (Presented by Messrs. Williams & Norgate, London.)	.. 1928.	Col. John Bonham.
9. On Future Warfare (Presented by Messrs. Sifton Praed & Co., Ltd., London.)	.. 1928.	Col. J. F. C. Fuller.
10. Polo Pony Training—with Hints on the Game. (Presented by Messrs. Gale & Polden, Aldershot.)	1928.	Col. F. W. Ramsay.
11. Handbook of the Swiss Army (Presented by the War Office.)	.. 1924.	Official.

BOOKS PURCHASED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. The Beginnings of Organised Air Power	.. 1927.	J. M. Spaight.
2. The First Flight Across the Polar Sea.	..	R. Amundsen and Lincoln Ells- worth.
3. Masters of War	.. 1927.	D'Esterre.
4. Navies and Nations	.. 1927.	H. C. Bywater.
5. Who's Who 1928	..	..
6. In the Hands of the Arabs	..	Zetton Buchanan.
7. Reputations	.. 1928.	B. H. Liddell Hart
8. Office Organisation and Manage- ment.	1926.	L. R. Dicksee and H. O. Blain.
9. Efficiency Methods	.. ..	M. & A. D. Moki'llop.
10. Hunting the Fox	.. 1925.	Lord Willoughby de Broke.
11. Official History of the Great War.. Military Operations, Egypt and Palestine, Vol. I, with Maps	1928.	Sir George MacMunn and Capt. Cyril Falls.
12. The World Crisis by Winston Churchill—A Criticism	..	Lord Sydenham of Combe.

BOOKS PURCHASED—(contd.).

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
13. India by Air ..	1927.	Sir Samuel Hoare.
14. Elementary Economics ..	1926.	S. J. Chapman.
15. The Life of Lord Curzon, Vol. I ..	1928.	Earl of Ronaldshay.
16. List of Officers of the Bengal Army 1758—1843, Part II ..	1928.	Maj. V. C. P. Hodson.
17. Adventures in Turkey and Russia	1924.	Colonel Keeling.
18. The Somme .. ..	..	A. D. Gristwood.
19. Genius and Character ..	..	Emil Ludwig.
20. History of the British Army, Vol. XII ..	..	Hon J. W. Fortescue.
21. The India We Served ..	1928.	Sir Walter R. Lawrence.
22. Our Inheritance ..	1928.	Stanley Baldwin.

BOOKS ON ORDER.

<i>Title.</i>	<i>Author.</i>
1. Army and Sea Power ..	Majors H. C. Eady and R. A. Pargiter.
2. China in Turmoil ..	King.
3. Five Years in Turkey ..	L. van Sanders.
4. Memoirs of Prince Max of Baden..	..
5. Customs, Manners and Ceremonies of the Hindus.	Abbe Dubois.
6. Bismark ..	Emil Ludwig.
7. Studies of An Imperialist of War, India and Socialism.	Lord Sydenham.
8. The Life of General Rawlinson of Trent. Lord	Sir F. Maurice.
9. Stalky's Reminiscences ..	Maj.-Genl. L. C. Dunsterville
10. The Regimental History of the Somerset Light Infantry ..	Edwin Wyrall.
11. The National Policy and Naval Strength ..	Sir H. W. Richmond.
12. A Gallant Company ..	J. W. Fortescue.
13. The War in the Air, Vol. II ..	Air Ministry.

IX.—Pamphlets.

The following may be obtained by V. P. P., plus postage, on application to the Secretary :—

- (a) British and Indian Road Space Tables (separately), As. 12 each.
- (b) Diagram of Ammunition Supply (India), As. 4.
- (c) Diagram showing New System of Maintenance in the field at Home, As. 8.
- (d) Military Law Paper, Questions and Answers, As. 4. (As used at the A. H.-Q. Staff College Course, 1926).

X.—Schemes.

The schemes in the Institution have been considerably increased and in order to simplify their issue they have been classified and numbered as follows :—

They can all be obtained by V. P. P., plus postage, on application to the Secretary.

(A) *Administrative Exercise, with diagram (Reprinted May, 1928).*

To illustrate the supply system of a Division (suitable for Staff College or Promotion) .. Rs. 2

(B) *Mountain Warfare (Reprinted May, 1928)*

(i) A scheme complete with map and solution .. ,, 5

(ii) Three Lectures on Mountain Warfare .. ,, 3

(C) *New Staff College Series (Reprinted May, 1928).* Complete with maps and solutions :—**(i) Approach March.**

Reconnaissance of night attack.

Orders for night attack Rs. 5

(ii) Outposts.

Defence.

Action of a Force Retiring ,, 5

(iii) Move by M. T.

Occupation of a defensive position.

Counter-attack ,, 5

(D) *Promotion Series (Reprinted May, 1928).* Complete with maps and solutions.***Lieutenant to Captain—***

(i) Mountain Warfare Rs. 5

(ii) Defence.

Attack orders ,, 5

Captain to Major—**(i) Outposts.**

Defensive position.

Withdrawal ,, 5

(ii) Tactical Exercise without troops.

Reconnaissance.

Attack orders ,, 5

(E) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War." As. 12.**(F) Copies of the recent (February 1928) Staff College Examination papers are available :—**

Strategy and Tactics Papers with Maps .. Rs. 2 each.

Other papers ,, 1 each.

(G) *Staff College Course Schemes* (1928):—

- (i) A set of three schemes, as given at the Army Head quarter Staff College Course, 1928, complete with maps and solutions, complete set .. Rs. 9
- A limited number of the following papers are available:—
- (ii) Supply Problem (with map and answers) .. Rs. 2 each
- (iii) Military Law Paper (with answers) .. As. 8 ..
- (iv) Organization and Administration—Peace (with notes for replies) 8 ..
- (v) Precis of lecture on Organization and Administration 8 ..
- (vi) Hints on Working for the Examination and on tackling the Tactical Papers 8 ..
- (vii) Lecture on Military Law III—Precis 8 ..
- (viii) Precis of Lecture on Reinforcements in War 8 ..
- (ix) Precis of Lecture on Night Operations 8 ..
- (x) Precis of Lecture on Bush Warfare 4 ..
- (xi) Waterloo Campaign 1815 (with map) .. Re. 1 ..
- (xii) Precis of Lecture on East Prussian Campaign, 1914—(I.—Battle of Tannenberg) .. As. 8 ..
- (xiii) Precis of Lecture on East Prussian Campaign, 1914—(II.—The Battle of the Masurian Lakes ; and General Lessons) 8 ..
- (xiv) Precis of Lecture on Palestine Campaign 12 ..
- (xv) Lecture on R. A. F. Organization and General Employment 8 ..
- (xvi) Lecture on R. A. F. Co-operation with the Army 8 ..
- (xvii) Precis of Lecture on the Employment of Cavalry with a Brigade of all Arms 8 ..
- (xviii) Precis of Two Lectures on the Organization of the British Army 8 ..
- (xix) Precis of Lecture on Ordnance Services with Special Reference to Movement on Transportation 8 ..
- (xx) Precis of Lecture on the Dominion Forces 8 ..
- (xxi) Precis of Lecture on the Armoured Force 8 ..
- (xxii) Precis of Lecture on the Auxiliary and Indian Territorial Forces 8 ..
- (xxiii) Precis of Lecture on the Artillery Organization .. 8 ..

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

Prize Essay Gold Medallists.

(With Rank of Officers at the date of the Essay.)

- 1872..ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
 1873..COLQUHOUN, Capt. J. S., R.A.
 1874..COLQUHOUN, Capt. J. S., R.A.
 1879..ST. JOHN, Maj. O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., S.C.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry.
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cav. Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver Medal).
 1899..NEVILLE, Col. J. P. C., S.C.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905..COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., R.A.
 1909..MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a Silver medal).
 1911..MR. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q.V.O., Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., M.C., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923..KEEN, Colonel F. S., D.S.O., I.A.
 1926..DENNY, Major L. E., M.C., 4112th Frontier Force Regiment.
 1927..HOGG, Major D. Mc. A., M.C., R.E.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (especially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894..O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909..MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(concl'd.).

- 1910..SYKES, Maj. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911..LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..PRITCHARD, Capt. P. P. A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917..MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918..NOEL, Capt. E. W. C. (Political Department).
- 1919..KEELING, Lt.-Col. E. H., M.C., R.E.
ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920..BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..HOLT, Major A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department.
- 1924..HAVILDAR RAHMAT SHAH, N.-W. F. Corps.
NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..SPEAR, Captain C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..HARVEY-KELLY, Major C. H. G. H., D.S.O., 4/10th Baluch Regiment
- 1927..LAKE, Major M. C., 4/4th Bombay Grenadiers
- 1928..BOWERMAN, CAPTAIN J. F., 4/10th D. C. O., Baluch Regiment.
MUHAMMED KHAN, Havildar, Zhob Levy Corps.

The Journal

OF THE

United Service Institution of India.

Vol. LVIII.

JULY, 1928

No. 252.

EDITORIAL.

The death of Lord Haldane removes another of the great men of the War, and one who was very greatly concerned with the part played by Great Britain in it.

The organisation and quick despatch of the British Expeditionary Force to France in 1914 was only possible by his efforts and by his foresight.

The extent to which the nation was indebted to him was never recognised during his lifetime and is only now being really realised. The wave of unpopularity and distrust which caused his removal from office at the beginning of the War put him into the background and embittered the last years of his life, but to those who knew, such as Lord Haig, Lord Haldane was even then recognised as perhaps the greatest War Secretary we have ever had.

The Expeditionary Force which he created was, unlike the organisation which preceded it, a war organisation. In creating it Lord Haldane's motto was "Will it work in war?" and everything which could not, was ruthlessly scrapped.

Almost as great a work was the creation of the Territorial Force, and it was not his fault that it was not made better use of in the Great War. It is, however, a great tribute to Lord Haldane that the Territorial Army is now recognised as our second line of defence on which the expansion of our military forces must be based in time of war.

In the sphere of politics and philosophy he was recognised as one of the finest intellects of our public life, but it is as Secretary of State for War in those crucial years of preparation from 1905 to 1912 that Lord Haldane will be remembered by the British Army.

* * * * *

The correct attitude of the soldier towards the present campaign for the abolition of war is a difficult problem.

The soldier is apt to be looked on with suspicion whatever opinions he may hold on the matter.

If he counsels caution and quotes history to support his argument by calling attention to the wave of pacifism which has nearly always been experienced after a war of any magnitude, he is considered as a militarist anxious for war as a means of climbing the ladder of military fame.

If, on the other hand, he goes with the stream and counsels the abolition of armies and armaments he is undoubtedly endangering the safety of the Empire.

Europe is only just starting to recover from the devastating effects of the last war and there is a strong wave of anti-war feeling among all those nations who experienced the last war, and also among those nations who did not experience the last war but feel that, either by reason of their military weakness or from other causes, they should at all costs avoid participating in the next.

This general anti-war feeling is natural and the soldier can only be in entire sympathy with it. No one who lived for any length of time in the operations zone in the last war can want to repeat the experience.

The fact remains, however, that new potential storm centres have arisen and we must not be led into the idea that the nations of the East are as averse from war as those of the West.

By all means let us reduce our armed forces to the lowest margin of safety—but there must be a margin and we must see to it that the forces we are left with are as efficient as it is humanly possible to make them.

* * * * *

The new regimental and battalion organisation has produced interesting problems of tactical handling in the field.

The cavalry regimental commander, used to operating with two squadrons leading and a third in reserve ready to support either flank, now finds himself only left with a machine-gun squadron which is not suitable for employment in the same manner. Ought he therefore to only now commit one sabre squadron to start with, keeping a sabre squadron and a machine-gun squadron in hand?

Similarly, in the battalion, the O. C. could put two companies forward, could count on his third company as something which he could put in to restore the situation on either flank and still have a company in reserve for emergencies. Now, when his third company is gone, he only has his machine-gun company left which is not so suitable for offensive action.

These are some of the problems which must be engaging the attention of the Army at Home in their summer training this year.

* * * * *

The increase of machine-guns has, of course, enormously increased the defensive power of the unit for the machine-gun is at its best in the defence. To use it with success offensively requires initiative, bold handling by junior leaders, a high standard of training, and favourable ground.

In their great offensive in France in March 1918 the Germans had given considerable thought to this important problem. They pushed their light machine-guns well forward with the leading infantry, often carrying them in stretchers, and supported them by their heavy machine-guns carried in hand carts, but the system broke down completely in front of Arras, where there was no fog to blind the machine-gunnery of the defence.

The great difficulty is to get the guns well forward and into action without undue casualties during the process.

Many solutions have been put forward, of which a low self-propelled mounting, capable of going over fairly rough ground, is perhaps the most popular. Then comes the question of its vulnerability on the move—we give it armour and at once the tank enthusiast says “why not put it in a tank and scrap the infantry?”

Whatever may be the eventual solution, there is no doubt that the pressing problem is how to get forward in the attack, and, if the increase in machine-guns is to assist materially in this object, the tendency in favourable ground may be to look on the rifle as a support and guard to the machine-gun rather than *vice versa* as has been done in the past. But in really difficult country such as the N.-W. Frontier of India it is unlikely that the rifleman will ever be displaced, if only on the ground of mobility.

* * * * *

The introduction of battalion and regimental anti-tank weapons is a great step forward.

It has again made the infantry a self-supporting unit, able to defend themselves against every eventuality, but still only able to take successful offensive action by means of the co-operation of all arms.

The action of these unit anti-tank weapons should be co-ordinated, but they should not be brigaded in the same way as machine-guns. The whole object of giving the unit A. T. weapons of their own is that they should always have them handy for any eventuality and to meet surprise attacks of Armoured Fighting vehicles which have now to be expected from any direction.

It has been reported that a suitable automatic rifle has been produced and tried out with successful results. It appears unlikely, however, that we should go to the expense of re-arming our infantry with it in these days of financial stringency.

* * * * *

Military Law and Strategy and Tactics proved the chief stumbling block to officers on the Indian Establishment at the recent Staff College Examination.

No less than 156 officers failed in Military Law and 136 in Strategy and Tactics, while only 3 came to grief in the History and Organisation of the Empire.

Although no candidate passed into Camberley without taking at least two optional subjects, there is a tendency on the part of candidates going up for their first attempt to embark on optional subjects without making reasonably certain of obtaining qualifying marks in the obligatory subjects.

Fewer officers on the Indian Establishment qualified than last year but the Simla "Backward Boys" came out of the examination creditably, their results being

5 passed Camberley.
7 passed Quetta.
10 qualified.

22 Total.

The numbers competing for the Staff College are increasing each year. This year 337 officers on the Indian Establishment went up for the examination.

* * * * *

The standard of tennis in India as compared with Home is curious.

The pick of the Indian players, our Davis Cup team, were, at Wimbledon, a class below the crack players. Even Mr. Sleem, India's acknowledged leading singles player, was outclassed by the fast all court game of the leading Continental and American players.

Of the ladies, exclusive of Mrs. Covell who is no newcomer to Wimbledon, not one from India survived a match in the qualifying tournament at Roehampton. The standard of ladies' tennis in England is very high—comparatively much higher than that of the men.

Excluding the leading French and American men, however, the Indian standard compares very favourably with that at Home. This applies especially to the Army players. Indian Army players won the Army singles and doubles at Home and every member of the Army team in the Inter-Services tournament was on leave from India.

The Indian standard of athletics generally is, however, lamentably below that of the European and American nations. In the recent Olympic games the performances of the Indian athletes were poor to say the least of it.

In the ranks of the Indian Army there must be better runners, if the incentive and encouragement were supplied to bring them forward and give them adequate training.

* * * * *

Two corrections must be made to the April number.

In discussing the decisions of the Home and Indian Governments with regard to the Skeen Committee report we stated "as regards the further expansion of vacancies, the Government could not accept the Committee's proposals for an increase by a time scale from the years 1929 to 1952, irrespective of whether efficient and suitable candidates were forthcoming."

The latter part of the above statement is, however, not correct, as on page 23 of the report of the Indian Sandhurst Committee we find it stated with regard to the time scale increase "It is not our purpose or desire that the number of Indian King's commissioned

officers in the Army should be increased without reference to considerations of efficiency. We recognise that in the Army there can only be one standard of efficiency, namely the highest. We hold strongly, therefore, that the severity of the existing tests should not be relaxed in any way, and, if Indians capable of satisfying these tests are not forthcoming, then the pace of Indianisation must for the time lag behind the number of vacancies offered. ”

In discussing the abolition of the lance as a weapon of war at Home we said that “ Indian lancer regiments will continue to be armed with the lance.” We should have been more correct to have stated “ units armed with the lance in India will continue to be armed with the lance ” as the lance is being retained as a weapon of war for all such regiments, both British and Indian, in India.

NARRATIVE OF OPERATIONS OF THE 11TH CAVALRY BRIGADE FROM 23RD OCTOBER TO 3RD NOVEMBER 1918.

BY

LIEUT.-GENERAL SIR R. A. CASSELS, K.C.B., C.S.I., D.S.O.

PART I.

PREFACE.

1. Prior to operations commencing, the general dispositions of the enemy were calculated to be as shewn on Map E.

Summarised they were as follows :—

(a) Holding the Fathah position both banks—

2,620 rifles.

68 machine guns.

28 guns.

90 sabres.

(b) Holding the Humr.—Lesser Zab position—

2,910 rifles.

64 machine guns.

14 guns.

30 sabres.

(c) At Sharqat—200 rifles.

(d) On the Kirkuk—Altun Kupri line—

2,240 rifles.

42 machine guns.

30 guns.

330 sabres.

2. First Corps orders, issued on the 18th October, clearly indicated the general intention, the salient points of which were—

(a) That a column of 3 Sqdns. Cav., 1 Batty. R. F. A., 2 Bns. Infantry and 1 L. A. M. Batty., detailed by Third Corps, was to co-operate in the direction of Kirkuk and Altun Kupri so as to contain as many enemy as possible on that line and prevent the Turkish Kirkuk group moving down the left bank of the Lesser Zab against the right flank of the First Corps.

(b) That the main operation to be carried out by the First Corps and Attached Troops was to commence with an attack on the enemy holding the Fathah position with a view to securing the passage of the Fathah Gorge preparatory to advancing to the line of the Lesser Zab.

(c) That the above was to be carried out on the morning of the 24th October as follows :—

18th Division to attack the enemy holding the Fathah position left bank with the 7th Cavalry Brigade co-operating to the north of the Jabal Hamrin against the enemy in reverse.

17th Division to operate on right bank to facilitate the task of the 18th Division and 7th Cavalry Brigade on left bank.

3. Prior to the issue of orders above referred to, and as a result of reconnaissance made to the west of the Jabal Hamrin on the right bank, it had been decided, owing to the absence of water away from the Tigris itself and the inaccessibility of the latter for some 40 to 50 miles, that the employment of the 11th Cavalry Brigade against the enemy's right and rear was not practicable. It was found, on the other hand, that there were practically no water difficulties on the left bank while the country between the Jabal Hamrin and the Lesser Zab presented no obstacles to movement.

In view of the above, and in consonance with the general plan, the 11th Cavalry Brigade was given a special mission, instructions regarding which issued on the 21st October and were to the following effect (*vide* Map E).

The brigade was to move from Ain Khalid on the night 23/24th October so as to reach the Lesser Zab about Sadiyah on 24th October.

On the 25th October it was to operate down the Lesser Zab with the object of assisting the First Corps operations by—

(a) Intercepting movement to or from the left wing of the enemy Tigris group.

(b) Assisting in obtaining a bridgehead over the Lesser Zab preparatory to the arrival of the First Corps.

Note.—(Though this was as far as my instructions actually went, the Corps Commander had discussed with me all possible future eventualities. Amongst others, I was aware that I might be called upon to cross the Tigris above Sherqat any time after the 25th October. I was thus enabled to think and arrange ahead for this contingency.)

4. Preparatory to carrying out the above instructions the 11th Cavalry Brigade, marching up right bank, crossed the Tigris at Tekrit on the 22nd October and went into bivouac opposite the town.

In order to increase mobility and radius of action the following arrangements were made at Tekrit:—

(a) A dump was formed on the right bank at Tekrit, attached to the 17th Division, consisting of—

All sick men and animals.

Kahars of C. C. F. A.

Portion of Mob. Vet. Section.

Post Office.

All kits carried in A. T. carts.

(b) Utilizing the extra A. T. carts thus obtained it was found possible to arrange to carry the following rations when the brigade marched on the 23rd October:—

Unexpired portion of ration for man and horse—on man and horse.

1 day's emergency ration for man and horse—on man and horse.

2 days' rations men and 2 days' grain animals (no fodder) in transport.

(c) The services of a L. P. O. with cash and a Ford van were put at the disposal of the brigade by First Corps.

(d) An Arab guide with knowledge of country between the Jabal Hamrin and Lesser Zab was found and attached to the brigade and a party of "killeckchies" was collected and detailed to march with the transport.

(e) Arrangements were made with the First Corps to further increase our radius of action by putting in 2 days' rations for the brigade at Ain Khalid; one for issue on the 23rd October on arrival at that place and the other to be conveyed in Ford vans to the Lesser Zab on the 24th, following the brigade.

5. I had been informed that the intention was to despatch the L. A. M. brigade on the 24th October to Hadhr with the idea that it should operate from there on the 25th October and subsequently against the enemy's L. of C. and rear about Sherqat, depending on circumstances.

PART II.

OPERATIONS 23RD—30TH OCTOBER.

The brigade marched from Tekrit (left bank) for Ain Khalid (distance 32 miles) at 0300, on the 23rd October and got into bivouac at that place by 1340, having halted, watered and fed at the south end of the Ain Nakhailah pass *en route*.

The transport reached bivouac at 1630 having also watered and fed.

In accordance with instructions I had received, I proceeded by car to Tel Abu Shahamah on the Ain Khalid—Tazah Road to meet General Lewin, Commanding Third Corps Column at 1200.

Having discussed the whole situation with him and after arranging for intercommunication between our respective commands during the forthcoming operations I returned to Ain Khalid and rejoined the brigade at 1500.

During the afternoon, orders for the following day's march to Sadiyah were issued—In these it was arranged that—

(a) The brigade should march at 0200 as follows :—

Advance Guard.—7th Hussars;

5th Field Troop.

1 Sect. " W " Battery, R. H. A.

1 Sect. 25th M. Gun Squadron.

Main Body. —Remainder of brigade—less slower moving details not urgently required.

(b) *Transport Column*—under escort of 1 squadron—consisting of —

" B " Echelon " W " Ammun. Column,

All water carts and cookers,

Tent Sub-Division C. C. F. A,

All A. T. carts with rations, etc,

to follow (a) as far as Hajal where it was to halt for night of 24/25th October.

(c) *Ford Van Convoy*—carrying 1 day's complete rations for Brigade—to follow at 0700 under escort to be found by O. C. Ain Khalid consisting of 2 L. A. M. cars, 3 Lewis gun detachments and a party of sappers.

The brigade marched at 0200 as arranged and reached Garha at 0605 where a halt was made to water and feed.

(Note.—The route followed by the brigade on this date is shewn on Map E).

At 0650 an aeroplane dropped a message from the First Corps to the effect that the enemy were reported by the 18th Division to have evacuated the Fathah position on left bank, while the 17th Division reported that the right bank was still held at 0300.

March was resumed 0730.

Advanced Guard reached Hajal at 1045 where an aeroplane landed and delivered a message from First Corps (timed 0800) to the effect that enemy had evacuated the Fathah position both banks and that our troops were pushing forward.

In view of the above change in the situation I decided to make straight for Uthmaniyat and informed First Corps (by aeroplane—copy to be dropped on 7th Cavalry Brigade) accordingly.

The Advanced Guard approached the Lesser Zab at the Zrariya Ford at 1445. At first there appeared to be no enemy in the vicinity. This was the conclusion a "contact" aeroplane, which arrived at 1500, also had come to, as it proceeded to land opposite the ford on the left bank. It was greeted, however, on landing, with heavy machine gun and rifle fire from the right bank at 600 yards range. The machine was badly damaged but the pilot and observer escaped unhurt. The enemy now also disclosed 4 field guns and it was evident that the ford was held in some strength—the enemy being disposed covering the ford, on the right bank.

The presence of this enemy detachment at Zrariya was unexpected but at the same time it was equally clear that our arrival was a surprise to them. In view of this and as it was getting late I decided to force a crossing at once. By 1545 a difficult but practicable ford (4½ feet deep) was discovered about 1 mile below the recognised Zrariya ford.

Meanwhile the section of "W" Battery had engaged the enemy covering the latter. Under cover of this fire the 7th Hussars with a section of the 25th Machine Gun Squadron were ordered to cross the river at the ford which had been discovered.

At 1600 another "contact" plane arrived and proceeded to spot for the guns.

By 1630 the 7th Hussars had crossed the river and having gained a footing on the bluffs overlooking the river on the right bank started to work round the enemy's right. This movement combined with the accuracy of our gun fire on the left bank proved too much for the enemy.

At 1640 they commenced to withdraw in a north-westerly direction leaving a detachment which was engaged with the 7th Hussars till after dark.

In this engagement the strength of the enemy was estimated at 800 infantry with machine guns, 4 guns and some cavalry. Our casualties amounted to 2 B. O. Rs. killed and 1 B. O. and 10 B. O. Rs. wounded (all 7th Hussars on right bank).

Though the enemy guns fired some 200 rounds they caused practically no casualties. Our guns, on the other hand, thanks to aeroplane observation, were most effective. The 7th Hussars captured 7 prisoners.

At 1745 orders were issued to the 7th Hussars to maintain a bridge-head on the right bank covering the place they had crossed and to keep in touch with the enemy during the night.

The Main Body arrived at 1800, by which time it was getting dark, and went into bivouac on the left bank opposite the 7th Hussars with orders to be ready to move at 0530 next morning if necessary. The length of the day's march was estimated at from 45 to 50 miles.

At 2200 a report was received that the Ford Convoy had reached a point some 2 miles from our bivouac in a southern direction and that it was held up by an obstacle and would remain there until next morning.

During the night some intermittent firing took place on the right bank.

Owing to the wireless machine breaking down it was not possible to communicate with anyone during the afternoon of the 24th and night of 24/25th October.

By 0600 on the 25th it was evident that the enemy had all withdrawn during the night and it was believed that they had gone towards the Tigris.

Steps were immediately taken to establish a bridge-head at Zrariya, to get a ferry working and to issue rations from the Ford Convoy which was about to arrive. Orders were also sent by despatch rider to the Transport Column at Hajal to join the brigade at Zrariya at once.

The ford at Zrariya was found to be 3 feet deep with hard bottom but the approaches on both banks proved very heavy going owing to deep sand and the cliffs on the right bank were found to be steep, necessitating ramping.

At 0700 an aeroplane landed bringing several messages from First Corps which made the general situation on the preceding day clear, and contained orders (timed 1830 and 2345) for operations for the 25th October. The latter were to the following effect :—

(a) That enemy had fallen back on both banks roughly to their Lesser Zab—Humr position.

(b) That 17th Division were to advance on right bank and get into touch with and engage the enemy on this bank, assisted by 18th Division's guns on left bank.

(c) That 18th Division were to assist the 17th Division in their advance and secure a crossing over the Zab—the 7th Cavalry Brigade being pushed across this river to threaten enemy's left.

(d) That 11th Cavalry Brigade was to co-operate in the latter operation.

Aeroplane left for First Corps with details regarding our yesterday's operations and the situation up to date.

At 0830 I despatched two L. A. M. cars (which had joined me during afternoon, 24th, after escorting Ford Convoy up to Hajal) down the left bank of the Zab to get into touch with 7th Cavalry Brigade and to warn them that a column from my brigade would be coming down the right bank of the Zab during the morning to co-operate with them. These returned at 1020 and reported that the leading troops of the 7th Cavalry Brigade had crossed the Zab about 0900 at Shumait.

Meanwhile all arrangements at Zrariya Ford were progressing satisfactorily.

At 1030 I started off with a column consisting of 23rd Cavy., 1 Section "W" Battery and 1 Section 25th M. Gun Sqdn. down the right bank of the Zab to co-operate with the 7th Cavalry Bde. in accordance with my instructions.

Before leaving I had issued orders for the Ford Van Convoy to be returned to Fathah direct, as soon as possible, taking with it the wounded and prisoners. The remainder of the brigade was warned to be ready to march at short notice.

From aeroplane reports received up to 1230 it was clear that the 7th Cavalry Brigade had pushed some way up the Tigris left bank apparently unopposed.

Directing my column therefore to march in a north-westerly direction I went on ahead in a car and met G. O. C. 7th Cavalry Brigade near and to the north-east of Nami at 1445. It appeared from what he told me that there were no Turks on the left bank, all having crossed to right bank at Humr Bridge. I therefore decided to withdraw my detachment to Zrariya and returned there myself by car at once.

On getting back to Zrariya I found that I was in a position to move early next morning, if required, rationed up to the 27th October. I reported this and the result of the day's operations to First Corps accordingly and issued orders for the brigade to be ready to march at 0530 next day (timed 1910).

At about 2000 I received a message from First Corps ordering me to push on to Sherqat, crossing ford above that place, if I was in a position to feed myself up to the 27th October. About an hour later First Corps orders (time 1841) were received which were to the following effect :—

(a) That the enemy having withdrawn to the right bank would probably retire northwards during night 25/26th October leaving rearguards.

(b) That there was a possibility of enemy having received or being about to receive reinforcements *via* Erbil.

(c) That the general intention was to pursue vigorously.

(d) That the following moves were accordingly to take place as early as possible :—

11th Cavalry Brigade to ford 13 miles above Sherqat to intercept enemy's retreat.

Fanshawe's Column direct to Sherqat left bank moving before daylight.

This column consisted of the—

7th Cavalry Bde.,

2 Troops 32nd Lan.,

1 Bde. R. F. A.,

1 Sect., 60 prs.,

1 Infy. Bde. of 18th Divn. with No. 2 Bridging Train less Bridge on Lesser Zab.

17th Division to gain ground during night and pursue on right bank.

(Note.—Fanshawe's Column was subsequently cancelled as shown later).

During the night orders were issued :—

(a) For the 2 L. A. M. cars with the brigade to proceed next morning down left bank Zab—to get across by bridge, which it was believed was being made at its mouth, and to rejoin the brigade opposite Sherqat as soon as possible.

(b) For empty carts, field kitchens and “lame ducks” in the way of men and horses to move down left bank of Zab next morning and report to 18th Division.

By 0630 on the 26th the brigade, having crossed the Zab by the Zrariya Ford, assembled on the right bank and marched off in a north-westerly direction.

Note.—Route taken by brigade on this date is shewn on Map E.

The brigade moved in three bodies as on the 24th October. In crossing the ford the following were lost :—

- 1 Indian Driver,
 - 12 horses,
 - 2 caissons,
 - 1 L. G. S. wagon
- } and their contents,
and several packs.

While on the march and between 0900 and 1100 I received the following information by messages dropped by aeroplane :—

(a) That 3rd Corps Column had occupied Kirkuk at 0300 that morning. (First Corps message timed 0930).

(b) That previous orders regarding Fanshawe's Column had been cancelled—that 18th Division were to throw bridge across Lesser Zab and improve bridge-head and help 17th Division attack on right bank—that 7th Cavalry Brigade were to move towards Sherqat to prevent enemy escaping to left bank. (First Corps message timed 0820).

(c) That the 7th Cavalry Brigade were just north of the Zab and opposite Humr at 0830.

(d) That the left bank Tigris was clear of enemy up to 15 miles north of Sherqat.

At 1100 the brigade halted and fed. *Note.*—No water was found *en route*.

At 1300 I received news by aeroplane that the L. A. M. Bde. was astride the Mosul Road north of Sherqat on the right bank and had cut the telegraph wire.

At this hour the head of the brigade reached a point about 7 miles east of Huwaish from where a good view of the right bank opposite was obtained and it was noticed that the Huwaish Gorge looked a likely place for the brigade to make for in the first instance.

The most important thing however at that time was to find a ford across the Tigris, which prior to operations commencing had been reported by an agent to exist somewhere opposite Jarnaf.

Reconnaissances were sent out accordingly on a wide front.

At 1530 a ford was discovered opposite Hadraniyah through the help of a local Arab picked up at a village opposite that place. The ford was a difficult one and entailed crossing 3 branches of the river—the last (nearest to right bank) being nearly 5 feet deep in its deepest part, with a swift current.

At 1545 I reported by wireless to First Corps that a ford had been found and that the brigade was crossing at once. Also that so far, no Turks had been observed on either bank.

(*Note.*—All future references, unless otherwise stated are to Map A).

By 1630 the Guides Cavalry had crossed and reached Hadraniyah where a Turkish hospital was found in a building which contained 4 medical officers and 80 sick Turks. Leaving a small guard to take these over I accompanied the Guides at the gallop to Huwaish Gorge; having left instructions for the 23rd Cavalry, M. Gun Sqdn. and Section "W" Battery who were then engaged in crossing, to join me at that place as soon as possible.

On reaching the Huwaish Gorge at 1710 unopposed, the strength of the position was at once self-evident, and I decided to hold it for the night at any rate.

By 1830 the troops which had crossed were disposed as follows :—

Guides Cavalry, M. G. Sqdn.	In position astride the Mosul Road
less 1 Section.	on the north bank of the Wadi al Muabbah.

Section "W" Battery	.. In action on the road to the north-east of Huwaish Ruins.
---------------------	--

23rd Cav. and one Section	In reserve behind bluff and to the north-west of the Ruins.
M. G. Sqdn.	

Bde. Hd. Qrs.	.. At the Ruins.
---------------	------------------

The remainder of the brigade remained for the night on the left bank opposite the ford—where the Transport Column arrived at 2000.

Signalling communication by lamp was established between B. H. Q. and the left bank. The wireless had to remain for the time being on the left bank as the ford was too deep to allow of the machine being taken across on horses without risk of loss or damage.

At 2040 a wireless message was despatched to all concerned (including O. C., L. A. M. Bde.) giving my position and asking First Corps to direct O. C., L. A. M. Bde. to report to me next morning.

At 2140 another message was sent to First Corps saying that I proposed advancing down the right bank of the Tigris next day and that I felt confident, if the 17th Division advance was pressed, that the Turkish Force on the right bank would cease to exist by the evening next day.

(*Note.*— I had had no news up to date of the progress of the 17th Division on this day nor of the 7th Cavalry Brigade but assuming that all had gone well in accordance with orders issued, it certainly looked as if the Turkish Force was in a tight place).

At 2200 orders were issued for the remainder of the fighting troops of the brigade (less 1 Sqdn. 7th Hussars) to join me at Huwaish early next morning.

Remainder to remain on left bank under escort of 1 Sqdn. 7th Hussars.

Ferry to be established in square CZ 76 c (map B) as early as possible.

At 0030 on the 27th I received First Corps message (timed 1745) of 26th October, to the effect :—

(a) That the right bank attack had made no progress during 26th ;

(b) That air reconnaissances tended to show that the Turkish reinforcements from Erbil had crossed the Tigris and were in the Sherqat area ; and

(c) Asking where I should like Ford Convoy to be sent on 27th.

On receipt of the above the following messages were despatched :—

(a) To First Corps.—Asking for Ford Convoy to be sent up left bank to my position on that bank. Asking for situation on left bank

downstream of my position and the whereabouts of the 7th Cavalry Brigade. Asking for 18 shrapnel to be sent up.

(b) To 7th Cavalry Brigade asking where they were.

The night passed quietly and without incident.

At 0600 'a squadron of the 23rd Cavalry was despatched to make a preliminary reconnaissance to the south.

They bumped into the enemy, almost immediately, in position about $2\frac{1}{2}$ miles to the south of Huwaish.

The first estimate of their strength was from 400—500 infantry with machine guns and at least 3 guns which were disclosed at once and which subsequently were turned on to our L. A. M. Bde., which could be seen working over the ground 3 to 4 miles to the south-west of Huwaish.

Sending instructions to the squadron to remain in observation I decided to attack the enemy as soon as my guns had got into action and I had received some news from my contact aeroplane which I was expecting shortly.

My object in deciding to attack was to make the enemy disclose his strength and dispositions and to conceal my weakness. I hoped also, in the event of my being able to eject him from the above position, to hold the same as my forward line with the Huwaish line as my main one.

At 0745 an aeroplane dropped a message containing First Corps Orders for the 27th October (timed 1920, 26th Oct.).

They were to the following effect :—

(a) That the enemy were still holding their Humr position and that the 17th Division were to attack vigorously on the 27th.

(b) That the 18th Division were to assist 17th Division by fire from the left bank.

(c) That 7th Cavalry Brigade were to move to Shuramiyah (*vide* Map E) to Corps Reserve.

Air reports received from contact aeroplanes soon after indicated that :—

(a) There was a general movement on the part of the enemy towards Sherqat from the Humr position, which looked as if they had abandoned the latter position during the night.

(b) That a large portion of the enemy had already collected at, or some 4 miles to the south of Sherqat.

(c) That some 500 infantry and guns were astride the road at C Z 93 c, $2\frac{1}{2}$ miles to the south of Huwaish.

Meanwhile patrols on left bank reported that there were no signs of enemy either upstream or downstream of our bivouac on that bank.

At 0900 I reported the situation to First Corps and 17th Division giving gist of aeroplane reports just received and my intention to attack enemy nearest to me in the hopes of securing his line as my forward position.

The position of the L. A. M. Brigade to my right front was also mentioned and I added that vigorous action on the part of the 17th Division seemed indicated.

By this hour a ferry had been completed about $3\frac{1}{2}$ miles downstream of the ford and vehicles containing stores and supplies which were required on the right bank had been collected there. The tent sub-division of the C. C. F. A. was also established there soon afterwards.

At 1115 I received First Corps message (timed 0840) by aeroplane to effect that 17th Division patrols confirmed aero reports regarding no enemy movements or troops at Humr, Qalat-al-Bint and Ain Dibs (see Map E) and that 18th Division were to form and immediately despatch a column up left bank to block enemy ferry near Sherqat and push forward thence to ford opposite Hadraniyah.

At 1210 I received an aeroplane report stating that, with the exception of the enemy detachment already reported astride road at C Z 93 c, no movement observed between latter and Sherqat—that a large movement of enemy troops was still going on towards Sherqat from the south and that 3,000 were already at Sherqat.

At the same time I received a report from a patrol which I had despatched up the Mosul Road to the effect that enemy infantry about 400 strong were advancing south along Mosul Road and were at 1120 about 5 miles north of Shahalah, i.e., about 14 miles north of Huwaish.

At 1215 I despatched a squadron of the 7th Hussars to hold up above detachment.

Meanwhile the whole of "W" Battery had got into action with 4 guns on the high ground about 1,500 yards west of north of the Huwaish

Ruins and 2 guns in the plain on the same alignment east of north of the ruins and a central observation post at the ruins themselves from where an excellent view of the country to the south and south-west and west could be obtained.

At 1230 the 23rd Cavalry accompanied by a section of 25th M. Gun Squadron advanced rapidly down the Mosul Road and attacked the enemy in their position astride the road about C Z 93 c under cover of the guns, the main attack being directed with conspicuous dash against the enemy's left.

The enemy disclosed his strength and exact position from the first and gave the guns several good targets which were taken the fullest advantage of. It was also evident that the original strength of the enemy had been underestimated. There were at least 800 to a 1,000 infantry with machine guns and 4 guns were disclosed. Feeling satisfied that my main object had been attained I decided to give up any further idea of ejecting the enemy from his position, and ordered the 23rd Cavalry to withdraw at once, while "W" Battery continued to keep up a steady fire and made an accurate register of targets in view of possible future developments.

At 1325 O. C., L. A. M. Brigade reported to me personally at Huwaish Ruins and received the following instructions :—

(a) Two cars to be despatched about 12 miles up the Mosul Road and on return to report to me.

(b) The remainder of L. A. M. Brigade to remain in observation 5 miles south-west of Huwaish and in the event of enemy turning movement round my right flank to stop it at all costs.

At 1445 I received an air report to the effect that the enemy were seen digging on a line some 2 to 3 miles south of Sherqat ; estimated strength on this line 2,000—3,000.

In view of all air and other reports received by me during the day and up to this time the general situation appeared to be as follows :—

(a) Whole Turkish Force on the right bank.

(b) 2,000—3,000 Turks preparing to meet 17th Division (coming up right bank) some 2 to 3 miles south of Sherqat.

(c) A 1,000 Turks facing my brigade, $2\frac{1}{2}$ miles south of Huwaish.

(d) Remainder of Turks (anything from 4,000 to 5,000) at or near Sherqat.

(e) A Turkish detachment moving south along Mosul Road some 12 to 14 miles north of Huwaish watched by one squadron.

(f) 18th Division Column from Lesser Zab moving up left bank.

(g) 7th Cavalry Brigade at or *en route* to Shuramayah.

At 1500 a wireless message was sent to First Corps and 17th Division giving result of the recent engagement and stating that it was now my intention to fight anything sent against me on the Huwaish line. I also enquired regarding the progress of 17th Division, as I had had no news of them all day.

At 1635 I sent by hand of an officer a message to the G. O. C., 18th Division Column, moving up left bank, giving him a summary of the situation on the right bank—telling him that I had no news of the 17th Division—stating that it was possible enemy would make an early determined effort to break through me and suggesting, in this event, that he could best help by co-operation from left bank, between Sherqat and Qabr Gazi, and by sending me some infantry if available to my ferry at CZ 76 c.

Meanwhile I had received no further news of the progress of the enemy, northern detachment moving down the Mosul Road so concluded that the squadron sent to hold it up were successfully doing so, but at 1730 the two L. A. M. cars which had been sent up in that direction returned and reported that they had drawn fire from two camel guns on reaching a point opposite Shahalah.

Note.—These cars remained with me during the night.

At 1740 I reported to Corps that there was no change in the situation since the submission of my 1500 report.

At 2030 I received a wireless message from First Corps (time of despatch uncertain but prior to 0900 27th Oct.) stating that 18th Division Column left Lesser Zab at 0900 and consisted of, 1 infantry brigade, 2 troops cavalry, 2 60 pounders, 2 4·5 howitzers, and 1 battery 18-pounders with orders as already mentioned.

At 2130 I received a message from General Sanders (Commanding 18th Divisional Column moving up left bank) timed 1500 and sent by a cavalry patrol to the effect that he intended marching all night, that 18-pounder ammunition had already been sent ahead for me and that he would do his best to help.

At 2200 I received a wireless message from First Corps to the effect that 18th Division Column would reach Sudairat by 1830, that if

pressed I was to call upon Sanders for infantry and that the 7th Cavalry Brigade was being sent to reinforce me next day, the 28th October. On receiving the above I made out a message to Sanders amplifying the one sent at 1635 and despatched the same at 2240 by the hand of an officer. In this message I gave the three alternatives which I considered were now open to the enemy, *viz* :—

- (a) To escape to the east across the Tigris.
- (b) To hold me off and meet the 17th Division attack which was pending.
- (c) To leave a rear guard to hold off 17th Division and break through me ;

and stated that I considered (c) was the most likely.

I also emphasised the fact that I wanted the 18 pounder ammunition he had for me as soon as possible and infantry if he could spare them.

The rationing arrangements during the day were as follows :— Some sheep were purchased locally by the L. P. O. attached to the brigade. Rations were cooked by unit ration parties at ferry left bank and were subsequently ferried across to right bank together with grain for animals.

A large amount of jowari growing close to the position on right bank was also purchased and cut, and given to the horses as opportunity offered during the day.

During the night the brigade was disposed as under :—

Guides Cavalry and	..	Holding position astride road as before on north bank of the Wadial Section).
M. G. Sqdn. (less 1		fore on north bank of the Wadial Muabbah.

" W " Battery	..	In action as already indicated.
---------------	----	---------------------------------

7th Hussars (less 2	}	..	In reserve behind bluff north-west of Huwaish Ruins.
Sqns.) 23rd Cavalry.			
1 Section M. G. Sqdn.			
2 L. A. M. cars.			

1 Sqdn. 7th Hussars	..	In observation of enemy detachment about Shahalah.
---------------------	----	--

1 Sqdn. 7th Hussars	..	On left bank.
---------------------	----	---------------

Bde. Hd. Qrs.	..	At Huwaish Ruins.
---------------	----	-------------------

The night passed quietly, and dismounted patrols pushed south reported no movement on part of enemy towards the north or north-west.

At 0500 on the 28th, horses were saddled up ready to move.

At 0610 no enemy movement visible to south, south-west or west.

Shortly afterwards we established visual communication with Sanders' column on left bank about Ruins (CZ 94 a).

Received a report at same time that the 337th F. A. Brigade Ammunition Column with 836 rounds of 18-pounder ammunition had arrived at the ferry. This was most welcome news.

At 0640 I received a message from Sanders (sent by hand and timed 0330) saying that he would reach the ruins, south-east of Huwaish at dawn and that he had 6 pontoons with him.

Reply sent to this at 0655 to effect that I had had quiet night—no indication yet of Turkish intention—that I was awaiting aeroplane report before deciding on course of action—that I should like his pontoons sent to ferry.

At 0700 the Turkish infantry, extended on a front of some 700 yards with their right on river, were seen advancing slowly but deliberately north directly against my position at a distance of some 2 miles.

Soon after, 3 of our aeroplanes were seen flying north up the right bank. While passing Sherqat, or the ground to the north of it, they drew the fire of the whole Turkish army—at least this was the impression I got from the volume of noise produced, which lasted fully 10 minutes.

At 0705 I despatched the 3 L. A. M. cars I had with me up the Mosul Road with orders to report to O. C. Squadron, 7th Hussars who still remained in touch with the enemy, northern detachment.

At 0715 I received a message from the O. C. this squadron, which was then about 1 mile north-west of Jirnaf, that the enemy looked like advancing and had started working round his left. At the same time a message was despatched to Sanders telling him about the Turkish advance from the south and asking him to get his guns on to the m in enfilade, and to send infantry up to ferry as soon as possible.

At 0720 the Turks opened fire with his guns, field guns being turned on to my position while his howitzers (4.2") started by engaging Sanders' Column on left bank with apparently good effect.

(*Note.*—It was difficult at first to estimate the number of guns the Turks had in action against us but by the evening I came to the conclusion that there were probably 24. Contrary to the Turkish usual

practice to husband ammunition these guns kept up a steady fire all day and well into the night).

At 0745 I received a message from Sanders (timed 0630) telling me that his guns were in position and ready to knock out enemy's guns when found and asking me to do all I could to make him fire his guns.

A reply was sent at 0750 to effect that enemy had already disclosed probably all his guns and that I hoped that his artillery had been able to locate them.

I added that I had received no aeroplane report so far and could not say in what strength the enemy were advancing against me but thought that they were in considerable numbers.

At 0800 Sanders informed me by helio that he had despatched the 17 Gurkhas to join me *via* the ferry.

At the same time I received an aeroplane message giving location of two of enemy batteries, *viz.*, at CZ 93 c 1/3 and at CS 3 c 1/6. No mention was made regarding strength of enemy.

The above information was passed to Sanders at once. Meanwhile the enemy continued to advance in strength but slowly, due to the great accuracy of the fire of "W" Battery guns, which opened at the moment the advance was observed to start, and the co-operation of Sanders guns on left bank which were being ranged on to the "bursts" of "W" Battery.

At 0805 I decided to make a counter against the enemy's left and detailed the 7th Hussars to move off at once to carry it out. Their orders were (a) to approach the enemy's left (which was then about CZ 92 b 5/0) rapidly and without being seen, by moving across my front up the Wadi Muabbah for about a mile, and then left up a branch nullah, which lead to the west of CZ 92 central and (b) to attack suddenly from there to the left, according to circumstances.

At 0830 I received First Corps orders for the 28th (issued previous evening) telling me to call on Sanders (who was watching left bank up to me) for help if required and that my orders were to cut enemy's retreat with the co-operation of Sanders and Norton (commanding the 7th Cavalry Brigade).

Meanwhile the 7th Hussars had moved off as ordered.

At 0915 heavy firing could be heard in the direction of CZ 92 central which indicated that they had reached their objective. This

was very shortly confirmed by observation as the Turkish left were seen to start falling back.

At 0930 the following situation report was sent to First Corps :—

Shortly after 0700 Turks started advancing towards me from line CZ 93 c 2/3—CZ 92 c 5/8 in force. Up to present they have made no progress whatever as my guns can deal with any forward movement with perfect observation while Sanders guns from about CZ 94 are co-operating in enfilade with apparently great effect. I have one regiment enfilading Turkish left from vicinity CZ 92 central. Remainder of brigade is in position on my main line or in reserve.

Sanders has sent me a battalion which is now approaching my ferry. On arrival I shall have this further reserve. Have arranged to meet Norton on arrival and will get him across to right bank without difficulty. I am, of course, unaware of Turkish intentions but if he is trying to break through me with the bulk of his force he cannot do it.

(*Note.*—This and subsequent messages to First Corps were now being sent by cyclist despatch rider *via* ferry to Sanders Headquarters for transmission thence by cable).

At 1000 I received a report from O. C. Squadron watching enemy, northern detachment, that he had had to retire about a mile.

At 1015 the O. C., 7th Hussars reported that the enemy's left were making a further retirement and that he was following them up keeping on their left flank.

(*Note.*—This advance, as I learnt after, was carried out almost too boldly, for 1 squadron suddenly found themselves facing enemy guns which started firing at them at point blank range at 150 yards, fortunately with little effect).

At 1025 I gave the above information to Sanders so that his guns might be warned as regards range.

At 1100 two troops (7th Hussars) from left bank reinforced the squadron, 7th Hussars watching enemy, northern detachment on right bank.

At the same time it was observed that the Turks had commenced to advance again from the south on their original front but in small numbers, well extended, while large columns were seen to be moving north some $2\frac{1}{2}$ to 3 miles to the south-west of my position with the evident intention of working round my right.

This was confirmed at 1105 by the 7th Hussars who rejoined me at that hour after having carried out their task with conspicuous dash.

The 7th Hussars were now ordered to extend my line to the north-west covering the guns.

At 1140 Sanders was informed of the change in the situation. Meanwhile the enemy's columns, harassed by my guns, continued to make slow progress to the north past my right.

At 1215 therefore the 23rd Cavalry were ordered to further extend my right to the north-west and get into touch in the vicinity of CZ 65 central, with the 7th Hussars detachment watching the enemy northern ditto.

At 1230 I received by aeroplane, copy of First Corps message timed 1110 and addressed 17th Division, to effect that, according to air reports, there were no Turks to the south of Sherqat—that large numbers were in nullahs about CS 11 b and d, CS 12 a and c, and CS 2 d—that 17th Division were to push on vigorously and obtain close contact with above.

At the same time I received an aeroplane message giving me the following estimate of the strength of the enemy to my south-west at that time :—

At CZ 91 a 4/2	.. About 100 in a nullah.
About CZ 91 c 6/2	.. About 250.
Between about CZ 91 c and CZ 92 d	.. Some 2,000 in groups of 100 and 500 all moving north.
At CS 2 a 9/8	.. 100 behind a cliff, stationary.
At CS 2 a 2/5	.. 300 stationary.
Total	.. About 2,750.

(Note.—These presumably were in addition to some 200—300 who had already been seen to pass to the north of the Wadi Muabbah).

The above information was passed to Sanders at 1235 with a request that his guns might be turned on to enemy groups.

At 1300 I received a message by despatch rider from O.C., L.A.M. Brigade (timed 0915) to the effect that he had his cars some 4½ miles to my south-west which were engaging attacking Turks with their fire whenever possible.

The situation at this time was briefly as follows :—

1. **TURKS.**—(a) Small bodies (300—400) advancing extended to occupy high ground to the south of the Wadi Muabbah and opposite my original portion of line.

(b) Large bodies (2,500—3,000) moving north past my right with the intention of either escaping north or turning my right.

(c) Northern detachment (400—500) making very slow progress, but progressing nevertheless, in a southerly direction about CZ 56 central.

(d) Guns (24) still maintaining their activity.

2. **OURSELVES.**—(a) The whole of the 11th Cavalry Brigade (less 6 troops) in occupation of our original line plus right flank now refused to about CZ 74 central.

(b) 6 Troops, 7th Hussars and 2 L. A. M. cars facing enemy, northern detachment.

(c) “W” Battery and Sanders’ guns in their original positions engaging every target presenting itself.

(d) Sanders’ leading battalion (1/7th Gurkhas) still *en route*.

(e) No sign of Norton on left bank.

(f) No definite news of 17th Division but presumably south of Sherqat.

(g) L. A. M. Brigade operating about $4\frac{1}{2}$ miles to my south-west of west. Under the circumstances I felt justified in asking Sanders to send me a field battery and another infantry battalion ; the latter to enable me to set free a mobile reserve.

I asked for these accordingly at 1315, the battery to be sent to the ford to cross, the infantry to the ferry.

At 1320 I sent the situation to O. C., L. A. M. Brigade and asked him to do his utmost to delay enemy outflanking movement and prevent his escape to north.

At 1330 a Ford van convoy with rations and Sanders’ pontoons arrived at the ferry (left bank).

The latter were most welcome as up to date all ferrying work, including the transportation of the infantry from left to right bank, had been done on one raft and a small captured boat.

At 1400 the leading company of the 1/7th Gurkhas arrived and immediately relieved 2 squadrons of the Guides.

(*Note.*—The Guides were still holding my original line facing south).

These squadrons were sent off at once to reinforce the 7th Hussars who asked for help to meet an attack against their front which appeared to be imminent.

At this period the enemy guns were particularly active especially against my refused flank which lent itself to being enfiladed.

I therefore, asked Sanders at 1415 to engage them.

At 1430 I received a message by aeroplane from First Corps (timed 1325) telling me that Norton would act under my instructions on arrival.

At 1445 the remainder of the 1/7th Gurkhas arrived and relieved the remaining two squadrons of the Guides which went into reserve.

At 1450 I despatched a message by despatch rider to catch Norton on the way up, asking him to send his brigade straight to the ford on arrival and to come himself to see me at Huwaish Ruins.

At 1600 I received a message from the 7th Hussars (timed 1530) to effect that though enemy in strength had worked forward towards him to within 300 yards, expected attack had not materialized.

At 1615 Norton reached my headquarters and his brigade was seen to have arrived at the ford and to have started crossing.

At 1620 I reported the situation to First Corps (repeating to 17th Division and Sanders) to effect that enemy had failed to break through me direct—that since 1100 the bulk of their forces opposed to me, supported by field guns and howitzers, had been moving to outflank me—that I had to throw back my right in consequence—that I had been able to harass enemy's advance continuously with my guns and machine guns but that enemy's guns had been active enfilading my thrown back right flank—that enemy, northern detachment had been held in check all day—that Norton had just reported personally and that his brigade was at the ford.

After explaining the situation in detail to Norton. I asked him

(a) to arrange to picquet the enemy's northern detachment for the night and to extend my line towards Jirnaf—bulk of his brigade being kept in reserve on my extreme right and (b) to be prepared first

thing next morning to dispose of the above enemy detachment and then co-operate on my right flank according to circumstances.

At 1715 the remaining two squadrons of the Guides were sent off to relieve the 7th Hussars who came into reserve.

At 1725 a message was sent to O. C., L. A. M. Brigade, giving him a brief summary of the situation—the rôle assigned to the 7th Cavalry Brigade and his orders, *viz.*—to assist next day in preventing Turks from breaking through to the north.

The enemy in the meantime had ceased to move in a northerly direction and were now facing me practically all along my front with their right on the bluff near the river, to the south-east of Huwaish, and their left about CZ 74 c 5/10. Both sides had been actively engaged with their rifles and machine-guns for some time and this continued throughout the night while our respective guns still remained most active.

At 1900 I received news of the 17th Division through Sanders to the effect that they had carried enemy first line of trenches, south of Sherqat at 1315 and the second line at 1400 and that they were pursuing towards Sherqat.

At 1915 I asked Sanders to inform First Corps and 17th Division that I should be holding following line at daybreak next morning :—From Tigris, astride Mosul Road at Huwaish, through CZ 74 central, thence refused towards Jirnaf.

At 2005 I reported to First Corps, repeating to 17th Division and to Sanders, giving situation at dusk as indicated above and Norton's instructions. Also that I was expecting another battalion of infantry from left bank as a reserve on my left flank. That I should continue to carry out rôle of preventing enemy escape to north to-morrow and that I presumed 17th Division would continue to press on.

At 2255 I received a wireless message from First Corps to the effect that the 17th Division had been ordered to reach me by 0700 the next day.

At 0130 on the 29th, a message from Sanders received to the effect that 1/39th Garhwalis had been sent to ferry to reinforce me and asking if I should like the 1/3rd Gurkhas and another battery as well.

Replied at 0145 that I should like this extra battalion and battery warned to be ready to join me.

At 0320 Norton reported (timed 0220) that about 400 Turks including 300 wounded in ambulances had surrendered to the 13th Lancers on the right of the line.

(*Note.*—The above number was an exaggeration—actual numbers being 109).

1/39th Garhwalis plus a section of 238th M. G. Company reached ferry at 0430 and the C. O. reported to me at Huwaish Ruins, coming on ahead.

During the night the enemy displayed much activity all along my line. The brunt of it was borne by the Guides on my left centre and the 1/7th Gurkhas on my left, both with marked staunchness.

At 0530 horses were saddled up ready to move.

At 0600 the following situation report was sent to First Corps and repeated 17th Division and Sanders :—

Situation 0515.—Activity along my whole front during night—no effort on part of enemy to break through our line—400 prisoners, majority wounded, and with an ambulance reported captured—seems probable some Turks have already passed north moving west of our line while others face us and more may be following from the direction of Sherqat with 17th Division on their heels. Norton who crossed ford with bulk of his brigade, less guns last night, has orders to move as soon as possible north and north-west with the object of rounding up any Turks who may have passed north and intercepting those that may follow. I shall co-operate as circumstances dictate with 17th Division to same end.

The distribution of the troops under my command and dispositions of the enemy at 0600 are as shewn on Map B.

At 0605 Norton reported to me personally. After discussing the situation a copy of his instructions (already despatched to him at 0545) was given to him. The gist of these has been indicated above.

At 0630 I received a report that the right of our line was being shelled from the north-west (presumably by Turkish northern detachment).

At 0700 the leading two companies of the 1139th Garhwalis arrived with O. C., who reported that the remainder of his battalion were coming shortly. Orders were given him to relieve the 23rd Cavalry and Guides as soon as possible, these 2 regiments on relief to join the 7th Hussars in reserve.

At 0730 large numbers of troops could clearly be seen from the Huwaish Ruins some 3 to 4 miles to the south, but nothing showed between the above and Huwaish.

In view of orders issued to 17th Division overnight it was thought that the above troops might be the 17th Division but in this case what had happened to the Turks? I felt confident that the bulk of the Turks had not escaped to the north although it was possible that small parties may have slipped past.

To be on the safe side however I sent Norton the above information at once and warned him to be ready to move off north in case of necessity and told him in the event of this necessity arising, that I would follow with my brigade as soon as I could.

At 0755 I received a report that A/337 Battery (sent by Sanders) had started to cross ford. I sent it orders to join Norton after crossing.

At 0800 I received an aeroplane message to effect that the most advanced troops of the 17th Division were at about CS 2 b 9/5 but that there might be some already in position as far north as CZ 92 d.

The above information rather confirmed what had been observed earlier, but was not convincing.

So I asked the aeroplane :—

- (a) To locate the nearest enemy troops to the south.
- (b) To reconnoitre 15 miles to the north and north-west.

Meanwhile at 0840 Norton reported that he was advancing, under cover of his guns, to seize the high ground to his north-west.

At 0850 C/337th Battery (sent by Sanders) arrived at ford and received orders to join Norton also after crossing.

At 0855 I received from the aeroplane the answers to my questions.

These amounted to the following :—

- (a) Nothing observed of any importance to north and north-west.
- (b) That nearest enemy to me were those actually facing me all along my line (*vide* map B).

I now asked the aeroplane to reconnoitre 15 miles to the west.

At 0945 a message giving the situation at 0930 was sent to First Corps and repeated to 17th Division and Sanders. The 3 main points mentioned were :—

- (a) That according to aeroplane the 17th Division were some 2 miles to the south of Huwaish.

(b) That aeroplane reports nothing of importance for 15 miles north or north-west.

(c) That I could get no definite information regarding the whereabouts of the bulk of the enemy.

Had they surrendered to the 17th Division?

At 1000 aeroplane reported that there was no sign of any troops for 10 miles to the west and that the 17th Division still appeared to be where previously reported (see message above received at 0800).

In spite of this persistence with regard to the 17th Division, I now decided in view of the fact that no movements could be observed north and north-west or west that the troops 2-3 miles south of Huwaish were the main Turkish army and not the 17th Division. Norton was at once informed accordingly and told to carry on preparatory to swinging south in order to close all avenues of escape to the north and north-west.

At 1030 Norton reported (timed 1000) that he was held up about CZ 65 c by heavy machine gun fire—that he was engaged in clearing hills with his guns—A/337 being in action on right bank and “V” Battery on the left bank.

A reply was sent at once that he could keep A3/37th Battery but that C/337th Battery should be sent to me as soon as possible (*vide* message timed 0850 above).

At 1100 aeroplane reported :—

(a) 3 of our L. A. M. cars about DF 81 b.

(b) 2 guns and a small body of men about DG 18 c (detachment from 17th Division).

(c) One battery at CS 11 b with 17th Division and Infantry Brigade (presumably H. Q. of these formations?)

(d). Enemy appears to be holding line CZ 92 d 8/2 to CZ 91 central.

The above confirmed the conclusion arrived at earlier (1000).

At 1110 I gave Sanders the above information, also that there was no indication of the Turks having escaped north, and told him that my guns had been turned on to the enemy, on line CZ 92 d 8/2—CZ 91 central, and asked for his guns to co-operate. At 1130 the O. C., C/337 reported to me. He was ordered to get his battery into action alongside the 2 guns of “W” Battery in the plain to the north east of Huwaish.

At 1145 I asked Norton how he was getting on with the detachment against which he was engaged and told him to sweep south as soon as possible.

At 1205, I got a reply to my 1110 message from Sanders in which he stated that his guns were being turned on to the Turks as requested—that he was pushing infantry and machine guns to river bank at CZ 93 d and asking me if I wanted the 1/3 Gurkhas.

I replied at 1240 that I should like the 1/3 Gurkhas.

At the same time I received a message from Norton (timed 1135) that he was still held up and that enemy opposed to him had commenced to advance south.

At 1245, however, I received a later message to the effect that he was pushing back enemy as rapidly as possible and that his sweep to south had commenced. .

At 1315 following situation report was sent to First Corps and repeated to 17th Division and Sanders :—

Situation 1300.—Norton reports starting his sweep south—no signs of 17th Division—activity along my whole front continues.

(*Note.*—It is noteworthy that the enemy's guns which had been so active against us from the south on the 28th and the earlier part of the night 28/29th remained absolutely silent during the latter portion of the night 28/29th, and the whole of the 29th. They had presumably got through their ammunition or been switched off on to the 17th Division—I think the former from what I learnt afterwards).

At 1452 message received from Headquarters, 18th Division (now opposite Sherqat on left bank) that 17th Division were going to attack CZ 92 d—CZ 91 central at zero hour, not before 1530, and asked if I was in direct communication with 17th Division.

At 1455, Norton reported that he had disposed of the enemy detachment opposed to him, and taken prisoners estimated over 1,000, and that he was now engaged in taking up a position facing south through CZ 65 central.

(*Note.*—Captures actually numbered 985 with 12 machine guns and 2 camel guns).

This final disposal of the enemy's northern detachment and the clearance of my right was most welcome news, especially as its

strength, according to reports received up to date, had been considerably underestimated.

(I am unaware of the details of this action but I understand that the 13th Hussars and "V" Battery took the most conspicuous part).

The above information was sent to First Corps and repeated to 17th Division and Sanders at 1500.

At 1503 a bombardment was heard to the south, presumably against the Turks on the line CZ 92 d—CZ 91 central.

"W" and C/337 were ordered to take part.

At 1505, Norton was warned to maintain the most forward line reached by him at dusk, throughout the night.

At 1513, 18th Division message received to effect that bombardment of enemy's line (already referred to) would last from 1500 to 1530 when the 17th Division would go in.

Meanwhile an aeroplane came over and on being asked certain questions I received the following reply at 1530 :—

17th Division advanced

line at ..CS 3 a 3/3—CS 2 a 5/3—CS 1 b 9/9.

Enemy facing 17th Division

on line ..CS 3 a 3/5—CS 2 a 7/7—CZ 92 c 5/5.

Enemy facing me

..As before.

Norton

..

..Headquarters at Cemetery (S. W. of Hadranayah).

Brigade moving W. S. W. in square CZ 74 a.

At 1550, I sent above information to O. C., L. A. M. Brigade adding that the only possible exit left open to the Turks was to the west and ordered him to close this about DF 90 central.

At 1620, aeroplane reported situation of enemy's troops to be unchanged and that 17th Division were bombarding enemy's position opposite to them.

At 1705, I reported to the 18th Division (in answer to their 2 messages) that I was not in communication with 17th Division and could not be until Turks between us had been disposed of, that I had taken part in the 1500 bombardment and that 2 Véry lights had just

been observed on the west flank of position attacked by 17th Division which might mean that the 17th Division had gained their objective.

(*Note*—I found out much later that these Véry lights were used as a signal by the Turks to counter-attack the 17th Division !)

At 1715 the 1/3 Gurkhas arrived and went into reserve behind my left centre.

At 1845 following situation report was sent to First Corps, 17th Division and Sanders :—

Situation 1800.—No change opposite my position which is now held by 3 battalions with machine guns lent by Sanders—Norton blocks avenue of escape north and north-west on line running approximately CZ 74 central in south-westerly direction—have co-operated with my guns during 17th Division activities this afternoon especially watching line of escape to west—during night have arranged to be very active against enemy facing me and to intermittently plaster area round CZ 82 central with my guns throughout night and shall be prepared to co-operate in finally disposing of the enemy from dawn to-morrow onwards according to situation—let me know 17th Division situation and intention.

(*Note*.—The situation at 1800 is shewn on Map C).

At 1915 O. C., L. A. M. Brigade reported to me personally and received instructions to be about DF 90 central, *i.e.*, on the west of the Turks at dawn next morning.

All prisoners and casualties were evacuated during the day to the ferry.

At 2030, I sent Norton brief summary of situation and my intention during the night and asked him to co-operate with his guns and be prepared to move at 0545 next morning, continuing his sweep south and south-west.

At 2200, I received a message from Norton (which had crossed the above) giving me his approximate line and telling me that in the event of enemy attempting to escape round his right flank during the night he proposed to pursue at dawn—that he was short of gun ammunition and did not intend to fire his guns during night unless urgently necessary.

At the same time I received First Corps message (timed 1914) to effect that 17th Division attack had not been completely successful—

that situation would not be clear till morning—that 17th Division would hold ground gained and hoped to complete defeat of Turks next day but that they did not hope to gain any more ground during the night.

At 2240 reply was sent to Norton that if he had definite information at dawn of enemy movement past his right flank he should pursue as suggested but that he should be careful not to be led away on a false trail—that the L.A.M. Brigade had been ordered to co-operate next day in his drive to the south, on his outer flank—that he should send to ferry for gun ammunition.

At 0315 on the 30th, First Corps message (timed 2315 on 29th October) was received to effect that 17th Division could not resume offensive until the afternoon, 30th October and that they were arranging to form a series of posts on the left of the Turks to prevent their escape to the west during night—that my orders for 30th were to continue to bar enemy's retreat to the north and north-west and to mop up any parties which may have escaped during night. The above information was passed to Norton at 0440 and the importance of his previous instructions regarding the continuance of his sweep to the south and south-west on 30th were again emphasized.

The night passed much more quietly although there was intermittent firing throughout—my guns as arranged plastered the ground between CZ 82 central and CZ 91 central.

In view of First Corps message (received at 0315 above) my general intention this morning was (a) to roll up the Turks facing me by attacking their left in flank from the north with the 1/3 Gurkhas while Norton continued his sweep to the south behind them and (b) to subsequently fall on the rear of the Turks opposing the 17th Division further south.

At 0630 just as this operation was starting white flags were observed to the south and it became obvious soon afterwards that the Turks facing me at any rate intended surrendering.

At 0655 a general advance by infantry to the line CZ 93—CZ 92 was ordered, with 11th Cavalry Brigade in reserve.

At 0715 the above information was sent to Norton and he was ordered to advance south at once on line CZ 73—CZ 82.

At 0720 the following message was sent to First Corps and repeated to 17th Division and Sanders :—Turks facing me have just surrendered. My infantry advancing on line CZ 93 central—CZ 92 central.

Norton ordered to move south on line CZ 73 central—CZ 82 central. My intention throughout the day is to press Turks facing 17th Division as far as I can.

At 0815 I received an aeroplane message to effect that Turks opposite 17th Division had surrendered.

Arrangements were now made for the infantry and 11th Cavalry Brigade to collect prisoners, material, etc., south of line CZ 84 central—DF 89 central and up to the 17th Division while Norton was instructed at 0900 to "Mop up" north of above line, going at least 10 miles west and north-west and 15 miles north, using the L.A.M. Brigade to help him if he could get into touch with him.

The situation was also sent to the L. A. M. Brigade at 0930 with orders to join in in the "Mop up" to the north.

At 1030 I received a message from the L. A. M. Brigade which had been repeated to Norton to the effect that 4 cars were engaged in pursuing a small party of enemy cavalry to the west of Qaiyarah and that a party of Turks was stationary about CZ 31 c.

As the dealing with this latter party came within the scope of Norton's instructions I left it to him.

At 1240 a further report was received from the L.A.M. Brigade to the effect that 25 Turkish Cavalry had been captured near Shura (15 miles north of Qaiyarah)—that Turks previously reported at CZ 31 c had moved north and numbered about 300—500.

At 1300 the above information was sent to Norton with instructions to co-operate vigorously with L.A.M. Brigade to round up the above and occupy Qaiyarah.

A copy of above was also sent to the L. A. M. Brigade.

A report regarding action taken with regard to the above was sent to First Corps at 1355 and repeated to 18th Division. Meanwhile the collection of prisoners, etc., proceeded.

By dusk over 3,500 prisoners had been sent back to the ferry. The 11th Cavalry Brigade and attached 18th Division troops bivouaced at the ferry (right bank) for the night.

At 1900 I received a message from the L.A.M. Brigade to the effect that the force of Turks previously reported moving to Qaiyarah had been captured and that Qaiyarah had been occupied. The above information was sent at once to First Corps, 18th Division and 17th

Division—with the remark that I had no news of Norton but would report further details on hearing from him.

(*Note.*—I got Norton's report at 1200 next day giving the following details regarding the capture at Qaiyarah on 30th :—1,000, prisoners, 10 machine guns, 1 camel gun, much material, including paddle steamer, and a large convoy).

He also stated that the mensil at Qaiyarah contained supplies especially atta, grain and dry vegetables.

PART III.

OPERATIONS FROM 31ST OCTOBER TO 3RD NOVEMBER.

October 31st.

(At 2100 the previous day I had received First Corps operation order 3 (G. 894 timed 1600) to the effect that a mixed force which included the 7th and 11th Cavalry Brigades and L.A.M. Brigade was to be formed at once under the command of Major-General Fanshawe to capture Mosul).

At 0005 on the 31st, First Corps message (G. 913 timed 2235) was received modifying previous orders as follows :—

- (a) Force consisting of 7th and 11th Cavalry Brigades and L.A.M. Brigade was now placed under my orders.
- (b) I was to move as early as I considered advisable in order to carry out mission assigned to General Fanshawe, *viz* :—capture of Mosul.
- (c) That I was to live on the country.
- (d) That remainder of Fanshawe's column, as under, would leave Qaiyarah afternoon, 2nd November in support :—
1 infantry brigade, 1 battery 18 pdrs, 1 section 60 pdrs.,
and 1 squadron cavalry.

At 0045 I sent by hand of an officer gist of above to Norton and instructed him to remain concentrated at Qaiyarah where I should join him at 1700 today with 11th Cavalry Brigade, portion of L.A.M. Brigade not already with him and portion of his own brigade left behind with 2 days rations.

The next 12 hours was spent in getting urgent necessities for the 2 brigades across the river by the ferry which at this period was more than congested, and in making arrangements for the forthcoming move to Mosul.

At 1200 I received Norton's message giving me details of his captures at Qaiyarah on the 30th which has already been referred to above.

This information was wired to First Corps and Fanshawe's Column at 1245.

The 11th Cavalry Brigade (with portion of 7th Cavalry Brigade and 2nd line L.A.M. Brigade) left the ferry at 1300 and reached Qaiyarah at 1700 to find the 7th Cavalry Brigade and L.A.M. Brigade and A/337 Battery (which had accompanied Norton on 30th) in bivouac at that place.

The news I had at that time of the enemy ahead of us was approximately as follows:—

At Mosul	.. {	1 Regt. 5th Division	.. {	800 rifles.
				70 sabres.
				20 guns.
	.. {	Mosul garrison	.. {	850 rifles.
				100 sabres.
				12 guns.
<i>En route to Mosul from Altun Kupri</i>	.. {		.. {	1,500 rifles.
				130 sabres.
				12 guns.

At 1800 a L.A.M. Brigade reconnaissance which had been pushed forward 20 miles beyond Qaiyarah returned and reported all clear.

1st November.

(Note.—References are to map D). My force moved to Hammam Ali on the 1st November preceded by a L.A.M. Brigade reconnaissance as far as that place which reported in due course that all was clear.

At 1045 I met Lt.-Colonel Leachman (who had gone forward in the first place with the L.A.M. Brigade reconnaissance) a few miles downstream of Hammam Ali with 2 Turkish officers who had a letter for the G. O. C.-in-C. regarding armistice negotiations. I instructed Leachman to proceed to the ferry at Hadraniyah and report to Fanshawe taking the 2 Turkish officers and the letter with him.

At 1430 I was handed First Corps message (G. 978 of 1st November 1918) which had been dropped by aeroplane to the effect that an armistice with the Turks had been signed at 1200 on the 31st October and that hostilities were to cease.

By this time my force was just getting into their respective bivouacs at Hammam Ali.

At 1500 I received a letter from the 5th Turkish Divisional Commander requesting me to return to Qaiyarah. I immediately went forward in a car to see him and found him some 5 miles south of Mosul. I explained that as I had only just heard of the armistice and as my force had already reached Hammam Ali, I declined to go back to Qaiyarah.

In going forward to see this commander I noticed that the Turks (estimated at 1 regiment of infantry with machine guns and camel guns) were in position astride the road at Lazzaka.

On getting back to Hammam Ali at 1800 I reported the above to First Corps and Fanshawe adding that I did not see my way to advancing on Mosul without fighting, if that was still the immediate intention.

At 2030 Leachman rejoined and handed me instructions from Fanshawe to effect that I was to remain at Hammam Ali until receipt of further orders and that Leachman was to proceed to Mosul to interview Ali Ihsan, the commander of the 6th Turkish Army, reporting result as soon as possible.

At 2330 I received G. H. Q. orders (X 3537 of 1st November 1918) directing me to push on to Mosul in the interests of law and order.

I assumed the above to be my final orders but feeling sure that my message, giving the situation during the afternoon and sent at 1800, had not been received prior to their issue I asked for confirmation at 0135 on the 2nd November.

2nd November.

I received the latter from G. H. Q. at 0945 with a modification which indicated that the location of our troops near Mosul was only required.

In the meantime I had despatched (at 0630) Leachman to Mosul with a letter to Ali Ihsan in which I informed him that my orders were to advance and to occupy Mosul—that I intended to move at 1200 to-day—that I hoped to avoid all conflict with his troops in my advance to prevent further unnecessary loss of life—and *that I* requested him to withdraw his troops at least 5 miles clear of Mosul leaving only sufficient guards in town to prevent Arab disorder until they could be relieved. Leachman returned at 1150 and informed

me that though Ali Ihsan had no intention of evacuating Mosul he did not intend to fight and had no objection to my advancing to the hills commanding Mosul on the south, which he would evacuate.

His idea was to establish a neutral zone between us with his troops on a line about $1\frac{1}{2}$ miles to the south of Mosul while my troops remained on a line on the high ground some 4 to 5 miles further south.

Though this was a step in the right direction I did not consider that I should thus be near enough Mosul to carry out my instructions.

Leaving orders for my force to advance to the position above indicated I set out at 1200 to interview Ali Ihsan.

On returning at 1645 to Abu Sif I found that our line had been occupied and the troops in bivouac.

The following message, which was despatched at 1830 to G. H. Q., First Corps and Fanshawe, sufficiently indicates the result of my interview :—1700. Have just returned after concluding, with Ali Ihsan, an arrangement which under circumstances prevailing this morning is satisfactory from every point of view. I am to advance to a line mutually agreed upon within about 2 miles of Mosul which Turks will continue to occupy for the present giving us every facility towards ensuring maintenance of law and order which at present is quite satisfactory. In addition have made preliminary arrangements for purchase from Turks direct of supplies to meet our requirements as far as available. To-night I hold hills commanding Mosul and plain in which it lies and will take up forward line tomorrow. Interview throughout most friendly.

Meanwhile, however, I received a message from G. H. Q. (X. 3551 of 2nd November 1918) to the effect that Mosul was to be occupied in accordance with Clause 7 of the Armistice Terms (a copy of which I received very shortly afterwards by aeroplane) and attention was drawn to clause 16 which ordered the surrender of all garrisons in Mesopotamia to the nearest Allied Commander. During the night, the necessary orders for the advance on Mosul next day, and for its occupation tactically, were issued. Details for the actual occupation of the town itself were also worked out.

Narrative of Operations, etc.

November 3rd.

Leaving instructions for my force to move at 0800, I went on ahead in a car to see Ali Ihsan again, in view of the change in the situation since I last saw him, leaving camp at 0630.

The result of this interview and action taken is summarised in the following message despatched at 1200 to G. H. Q., First Corps and Fanshawe :—

1200. Am now at Mosul with my headquarters at German Consulate. My troops occupy tactical points surrounding city and all main approaches to it. Details regarding my interview with Ali Ihsan Pasha being sent by despatch rider to Fanshawe. Foresee delay in literally complying with clauses 7 and 16 of Armistice Terms, which Ali Ihsan has not yet received, but as relations with him are perfectly friendly and I have complete trust in him there seems to be no reason for undue haste. Law and order in the city most satisfactory.

At 1315 I sent a further message to Fanshawe bringing out the following additional points :—

(a) That Ali Ihsan had received no orders regarding our occupation of Mosul nor as regards surrender—in fact his latest orders were not to do either.

(b) That since commencement of Armistice he had not attempted to evacuate troops or war material—on the other hand those evacuated prior to the news of the Armistice being received had been recalled.

(c) That he had promised to make no withdrawals of any description either from Mosul or the area which he commands.

(d) That I proposed at present to leave him to freely administer Mosul and his troops as regards maintenance while commanding the area tactically myself.

(e) That he had given me facilities to inspect his area with view to subsequent taking over and had undertaken to provide supplies on payment at once, the same to be adjusted later.

(f) That supply situation generally promised to be highly satisfactory.

At 1330 the Corps Commander arrived by aeroplane and shortly after interviewed Ali Ihsan presenting him with the G.-O.-C.-in-C.'s reply to his letter of the 1st of November, which made it quite clear that clauses 7 to 16 of the Armistice terms were to be complied with.

At this interview Ali Ihsan raised many points, all of which amounted to the one main thing, *viz.*, that he had received no orders from his government and did not see his way to a settlement until he did.

The Corps Commander left by aeroplane at 1545.

At 1830 Ali Ihsan came over to see me and made the following points :—

(a) That he had just received the terms of the armistice from his Government.

(b) That he must receive definite orders from his Government that Mosul is included under clause 7 of the terms.

(c) That clauses 5 and 20 of the terms (*viz.*, demobilization) were applicable to him and not clause 16 (*viz.*, surrender) in that he held his force to be a Field Army and not a garrison. He added as an argument in favour of this that clause 16 had not been applied, according to his information, to the 7th Turkish Army in Palestine.

The gist of above was sent to G. H. Q., First Corps and Fanshawe at 2030.

Shortly after I received a copy of G. H. Q. message (X 3591 of 3rd November 1918) to effect that G. O. C.-in-C. agreed that there was no need for undue haste in making the Turks comply with the terms of armistice of which they were apparently ignorant—that War Office had been asked to have full details sent to Turks especially as regards clauses 7 and 16.

General Fanshawe arrived early in morning of 4th November and took over from me—the situation then being as briefly recorded above.

PART IV.

MISCELLANEOUS NOTES.

TACTICAL.

The chief points to be noted from the operations as far as cavalry is concerned are—

(1) Cavalry has still its own particular uses in war—in fact the answer to the question “Who has heard of a war without a horse?” must still remain unchallenged.

(2) In the attack—the object can best be attained by using mobility to effect surprise, while making full use of ground and by striking suddenly against the flank of the objective under the supporting fire of as many guns and machine guns as are or can be made available.

This means that the fullest use must be made of the horses or, in other words, in the attack, use cavalry as cavalry, and not as infantry.

(*Note.*—Four examples to illustrate the above took place during the operations, *viz.* :—

(a) Crossing of Lesser Zab at Zrariya on 24th October by 7th Hussars.

(b) Attack on enemy's position south of Huwaish on 27th October by 23rd Cavalry.

(c) Counter against enemy's left south of Huwaish on 28th October by 7th Hussars.

(d) Attack on position held by enemy's northern detachment south-west of Hadranayah on the 29th October by 13th Hussars.)

(3) In the defence—A naturally strong position and a judicious selection of strong points along it, will enable a regiment of cavalry to hold up an ordinary attack on a surprisingly wide front, as was exemplified at Huwaish on the 28th and 29th October. This is largely due to the increase of fire power which 16 Hotchkiss guns has given to a regiment.

(4) The Hotchkiss gun may be said to have increased the fighting power of cavalry (both in attack and defence) by at least 75 per cent.

(5) It should be recognised that in the attack (especially if carried out as in (2) above) casualties amongst animals are bound to be high and it may also happen in consequence that the price to be paid for loss of arms and equipment (carried on horses) is high also. Casualties amongst men should not be higher at any rate than if the attack was carried out dismounted.

(6) The importance of personal reconnaissance by the commander of any cavalry force before he commits himself to an undertaking cannot be too strongly emphasized—and as this decision has usually to be made quickly, it follows that his place should always be “well forward.”

CONTACT AEROPLANES.

The following points were brought out during the operations and may prove of use hereafter :—

(1) It is essential for a cavalry brigade which has been given an independent mission to perform, to have some (a flight if possible) of contact planes allotted to it. This should be done some time prior to operations commencing so that previous practice can be carried out.

(2) Before the operations commenced important topographical reconnaissances of unknown country were made as follows :—

A certain area was reconnoitred by a plane and result noted on the map.

Next day this was verified by motor car reconnaissance—the previous air reconnaissance in most cases proved most accurate, and was, of course, in any case, invaluable for the rapid carrying out of the latter.

(3) The Popham Panel proved most useful and easy to work. On the move it was carried by a motor cyclist despatch rider who was always accompanied by another, to help in working it when required.

(4) The Popham Panel Code needs supplementing by the following questions, etc. :—

Confirm your last report.

Give situation round me locating all our and enemy troops.

Spot for my guns.

Can you locate enemy guns ?

(5) The location of brigade headquarters practically in the firing line, even if otherwise suitable, is not favourable from a contact aeroplane's point of view—as the aeroplane draws enemy fire on to itself whenever it flies over to drop a message.

(6) The reasons against asking a contact aeroplane to land are obvious but if a commander takes it upon himself to signal this order, there should be no question about complying with it.

(7) When wireless is the only other means of communication the value of receiving important orders, etc., by aeroplane cannot be sufficiently emphasized.

(8) In giving the location of our own troops aeroplanes should invariably state if the Popham Panels of these formations were observed.

COMMUNICATIONS.

(a) Motor cyclists again proved themselves invaluable. By taking 6 motor cycles from the machine gun squadron (in exchange for horses) and training extra men in the Signal Troop to ride them, this extra number of despatch riders was employed.

(b) During the Huwaish operations (26th to 30th October) visual signalling by night was much used. The electric lamps at present issued proved most unreliable. It is strongly recommended that Lucas lamps be issued instead, packed in two leather cases—the lamp in one the battery in another—to facilitate carriage.

(c) Electric torches are of no use as they cannot be depended upon.

(d) The pack wireless with the brigade was continually getting out of order and was due no doubt to the shaking the machine got during movement. Present packs are also much too heavy for animals to carry on a long march which has to be carried out rapidly.

The solution appears to be as follows:—

Pack sets for use with cavalry should be carried in Ford vans and be transferred to pack horses only when necessary. Though this would mean having both Ford vans and pack horses on the establishment of a pack wireless section it would be more economical in the long run.

ARTILLERY.

(a) Number of rounds fired totalled 2,800 as follows:—

At crossing of Lesser Zab, 24th October	.. 120
Huwaish, 27th and night 27/28th October	.. 680
Huwaish, 28th and night 28/29th October	.. 1,500
Huwaish, 29th and night 29/30th October	.. 500
	<hr/> 2,800 <hr/>

(b) Ammunition Supply. Owing to influenza the battery left Sheikh Habib with firing battery only, that is 100 rounds of ammunition per gun, instead of 176.

The ammunition column carried 200 rounds per gun, total 300 rounds per gun. All this ammunition crossed the Tigris at Huwaish to right bank.

During the fight the guns never had to slacken or stop firing through lack of ammunition, although at times the supply was running short.

The battery ammunition column replenished from the ferry, right bank, where ammunition from the 18th Division was ferried across on rafts.

The six 18 Pr. ammunition wagons of the column acted as First Line wagons to the battery.

(c) Carriage of 18 Pr. gun ammunition by the Battery Ammunition column.

1,200 rounds are carried in the ammunition column—of these 456 rounds are in six ammunition wagons (artillery) and 744 rounds in caissons and L. G. S. wagons. The latter (744) rounds are packed in wooden boxes (4 rounds per box) which are very liable to fall to pieces even at the trot over good roads, causing the shells to roll about loose thus denting the brass cartridge cases and often causing the latter to become detached from the shell.

After marching from Sheikh Habib to Samarra, 30 per cent. of the gun ammunition had become unserviceable owing to the above causes and had to be exchanged. There was also a case of 1 round H. E. exploding which disposed of 4 boxes of ammunition and rendered the caisson unserviceable and killed a horse.

Various extra precautions were taken to prevent ammunition boxes breaking (*e.g.*, extra wire was bound round them and sacks were wedged in between boxes to prevent them moving) but these had little effect.

For quick travelling over bad going, extra strong boxes appear essential. The alternative is to carry all gun ammunition in ammunition wagons (artillery) instead of in caissons and L. G. S. wagons.

(d) Co-operation with aeroplane.—Though previous arrangements had been made, the battery was only called up once by the aeroplane during the operations, *viz.*, At the crossing of the Zab on the afternoon of the 24th October, when the shoot was quite successful. The

aeroplane had no wireless and the shoot was done by means of V éry lights and Klaxon horn.

During the operations at Huwaish (27th to 29th October) the battery had an excellent observation post and although aeroplane observation was not essential, it would have been invaluable especially on the 27th and 29th.

Ground strips were exposed behind the guns throughout this period.

(e) No. 9 Ross periscope was used during the 28th and 29th October at the observation post at Huwaish—this was essential on account of enemy rifle and machine gun fire which made the spot somewhat “unhealthy.” It proved a most useful instrument and gave good magnification and field of view.

(f) Telephonic communications.—These were lengthy owing to a detached section of guns and were only cut or broken 6 times (quickly repaired) during the period 27th to 29th October. The telephones proved most useful.

(g) Horsing of G. S. wagons (2) with battery.—As these wagons move with “A” Echelon and therefore at not more than 4 miles an hour normally, L. D. mules would be more suitable for them than L. D. horses, especially as they carry heavy loads. The inclusion of 12 L. D. mules *vice* 12 L. D. horses in the establishment of a battery is therefore recommended.

FORDS AND FERRIES.

(a) Fords.—Two points were emphasized during the operations with regard to the fords used at the Zab and Tigris, *viz.* :—

(1) the necessity for clearly marking the fords, (2) the necessity for impressing on all ranks that when crossing a deep ford each man ought to take his own line and to keep his horses head upstream so that they cross in echelon, as it were, behind the other and to not follow head to tail.

(b) Ferries.—The ferrying done both at the Lesser Zab and the Tigris proved how extraordinarily well the light bridging equipment in possession of the field troop has been designed for its purpose. Its main advantages are that—

(1) It is portable enough, with teams of eight good horses in each wagon to be able to keep up with the “A” Echelon transport.

(2) It is very quickly erected.

At the Huwaish Ferry the first load of motor cycles was ferried across within $1\frac{1}{2}$ hours of selecting the site, in spite of some heavy ramping being required to get the wagons to the waters edge.

(3) It is very quick to work owing to (1) the ease with which the loading span and the trestles can be put down and taken up. At the Lesser Zab six motor cars were ferried over 70 yards of river in 35 minutes ; (2) the ease with which the raft can be rowed in comparison with a G. S. pontoon raft. At the Huwaish Ferry, which was about 300 yards wide, with a current of about 2 miles per hour, it was found that the former raft could do about $2\frac{1}{2}$ trips to 1 by the latter.

(4) The raft can take very big loads in comparison with any form of collapsible boat or temporary raft. It will easily take an 18 Pr. gun and loaded limber at one time. Some very heavy loads were ferried across at Huwaish, e.g., 46 men including a crew of 7 and 39 Turkish prisoners with all their equipment. This must have totalled 9,000 lbs.

The retention of this equipment with the Field Troop of the brigade has been clearly justified.

VETERINARY.

(a) This report embraces the operations of 11th Cavalry Brigade from 6th October 1918 to 3rd November 1918, both dates inclusive.

(b) The brigade marched from Sheikh Habib on 6th October and arrived at Tekrit, left bank on 22nd October. There was a halt for one day at Khirr camp, Baghdad, and a halt for 7 days at Al Ajik. The average distance for the 8 marching days worked out at $19\frac{1}{2}$ miles, exclusive of a short march of 6 miles to Tikrit from Aujah.

On the longer marches arrangements were made to water and feed *en route*.

A uniform pace of 5 miles per hour was maintained by the cavalry and R. H. A. The average pace of "A" Echelon transport (L. G. S. wagons) was 4 miles per hour, and of "B" Echelon (A. T. carts) about 3 miles per hour.

The distance covered, duration of marches, watering arrangements, etc., on leaving Tikrit until the arrival of the brigade at Mosul, are as shown below :—

Date.	Destination.	Distance.	Water (<i>en route</i>).
Oct. 23rd	Ain Nakhailah ..	32 miles ..	Springs south of pass 28 miles.
„ 24th	Uthmaniyat ..	45 to 50 miles.	Garha, 16 miles. Hajal, 30 miles.
„ 25th	Towards Tigris and back (Portion of brigade).	30 miles ..	Wadi, 15 miles.
„ 26th	Huwaish <i>via</i> Hadranayah.	35 miles ..	Downstream of Ras. Ghanaus, 30 miles.
„ 27th-30th.	No marching.		
„ 31st	Qaiyarah ..	12 miles ..	Nil.
Nov. 1st	Hammam Ali ..	24 miles ..	Shura, 12 miles.
„ 2nd	Towards Mosul ..	7 miles ..	Nil.
„ 3rd	1 mile south of Mosul	7 miles ..	Nil.

Notes.—(1) Time was an essential factor in the operations of 24th and 26th October, and on these dates the leading cavalry regiments moved at a rate of 6 miles per hour, for a considerable portion of the distance. With this exception, the pace throughout was as in (b) above. (2) During the long march to the Lesser Zab on the 24th, the heat was severe, the horses however showed little signs of distress. This was largely due to the fact that previous reconnaissance enabled the brigade to make straight for the water holes about Garha and Hajal. (3) During the period 27th to 30th October, the horses were put to a severe test, which, on the whole, they stood well.

As noted below, the rations during this time were at a minimum. Horses were saddled up from dawn to dusk.

Watering was irregular, only a few men could be spared, per unit, to water horses and the distance from cover to the river was from $1\frac{1}{2}$ to 2 miles and under distant machine gun and rifle fire. There was constant movement during the day which had to be carried out at a rapid pace.

(c) Rations were obtained as follows:—

October 6th—22nd	..Full grain and bhoosa on operation scale.
October 23rd—26th	..Full grain and half bhoosa.
October 27th—30th	..Half grain, about 8 lbs. of bhoosa for the 4 days and from 2 to 3 lbs. of jowari cut locally daily, as opportunity allowed.
October 31st	..Full ration of barley obtained from captured enemy supply store at Qaiyarah, and about 1 lb. of local jowari. No bhoosa.
November 1st-2nd	..Half ration of barley, carried from Qaiyarah. Full ration of bhoosa, obtained from Hammam Ali village.
November 3rd	..About 5 lbs. barley, no fodder.

(d) Sick animals were collected and evacuated, after leaving Tikrit as follows:—

At Ain Nakhailah, 3 animals were handed over to No. 4 Mobile Veterinary Section.

From Uthmaniyat, 15 animals were sent to the junction of Lesser Zab and Tigris, in charge of the Brigade Veterinary Officer. These animals were evacuated thence *via* Fathah to Tikrit under charge of a regimental Salutri.

During the operations at Huwais, sick and wounded animals were collected near the ferry. On 3rd November, 97 of these animals were evacuated, *via* Tigris right bank, under charge of a regimental Salutri. These animals were handed over at camp AM 61d, to No. 4 Mobile Veterinary Section which had moved to this location from Ain Nakhailah.

The Brigade Veterinary Officer left the ferry on November 4th to rejoin the brigade at Mosul, leaving at the ferry some 80 minor veterinary cases. These latter animals were evacuated under orders of the D. A. D. V. S. 17th Division.

(e) Casualties as given below are approximately correct :—

1. Battle casualties—

Killed	..	..	..	110
Drowned	..	..	..	17
Missing	..	..	..	47
Total				174

2. Other casualties, died or destroyed—

Exhaustion	..	..	..	20
Laminitis	..	..	..	11
Sprained tendon	..	..	..	2
Total				33

Total dead wastage .. 207

3. Evacuated—

Wounded	..	..	..	56
Saddle galls	..	..	..	100
Laminitis	..	..	..	40
Debility	..	..	..	39
Sprains	..	..	..	22
Injuries	..	..	..	13
Lameness, ringbone, etc.	..	..	..	4
Total				277

In addition to the above, there were 100 horses treated by the Brigade Veterinary Officer and remaining with the brigade.

Total inefficiency (less dead wastage) .. 377

(f) General condition, on 6th November :—

Cavalry rides	.. Fairly good.
L. D. horses	.. Poor.
Pack horses	.. Very poor.
L. D. mules	.. Good.
A. T. mules	.. Very good.

(g) The need for a few trained dressers (capable also of keeping records) on the Staff of the Brigade Veterinary Officer was brought out during the operations. Owing to the rather abnormal circumstances of the operations it was often found impracticable to evacuate animals

to receiving stations at once. They had to be dumped. Dressers to look after such animals at dumps and subsequently on the march to receiving stations would have been invaluable and would have reduced the total animal wastage to an appreciable extent.

MEDICAL.

1. The advanced dressing station and a light tent division accompanied the brigade from Tikrit on 23rd October 1918, all personnel who could not be carried in wagons being dumped.

Total medical personnel taken forward was—

B. Os.	..	..	..	4
B. O. Rs.	..	..	..	5
I. O. Rs.	..	..	..	3
A. B. C.	..	..	..	13
A. H. C.	..	..	..	5

Transport :—

Ford ambulance wagons	..	3
Ford touring cars	..	2
Light horsed ambulances	..	6
L. G. S. wagons	..	8
Water carts	..	2
A. T. carts for rations	..	8

Medical Equipment of 2 Sections.

2. 25-10-18. 1 B. O., 10 B. O. Rs. and 2 I. O. Rs. sick and wounded were brought across the Lesser Zab River in the horsed ambulance wagons and evacuated down the left bank to Fathah. 7 of the above were lying cases and were sent down in the motor ambulance wagons, and the remainder in Ford lorries.

3. 26-10-18. Sick were evacuated in empty A. T. carts marching to Fathah. The advanced dressing station marched with fighting troops, and the tent division with "A" Echelon. No casualties were received. The motor ambulances did not return in time to be ferried across the Lesser Zab, and returned to Fathah.

4. 27-10-18. The advanced dressing station crossed to right bank of Tigris by a ford. The tent division moved down on left bank and opened at ferry-head. The touring cars were ferried over in pontoons at noon. The Advanced dressing station opened at 1030

at Map A, CZ 84 a. Evacuation from the A. D. S. was by motorised ambulances and touring cars to ferry-head and then by pontoons to left bank to tent division. Total evacuated from A. D. S. to tent division during day :—

	B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
Wounded	.. 3	3	2	20
Sick	.. ..	..	..	6

One touring car broke down and was taken over to the left bank.

5. 28-10-18. A. D. S. remained in same position. Tent division moved back about 1 mile from bank. Casualties received during 28th :—

	B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
Wounded	.. 4	47	..	20
Sick	.. ..	2	..	5

25 sitting cases were evacuated by Ford lorries from tent division.

6. 29-10-18. A. D. S. and tent division remained in same positions. Casualties received during 29th :—

	B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
Wounded	3	..	17
(9 of above belonged to 7th Cavalry and 53rd Infantry Brigades)				
		B. O. Rs.		I. O. Rs.
Sick	1		1
Evacuated from tent division by M. A. C. and Ford				
lorries	44
Transferred to 38 C. F. A. at ferry-head				.. 17

Two motor ambulances rejoined from Fathah. The third was left near Fathah with a broken rear axle.

7. 30-10-18. After surrender of enemy 18 wounded Turks were collected and sent to 38 C. F. A.

At 1300 A. D. S. closed and removed to ferry-head right bank. Total casualties dealt with by 152 C. C. F. A. were—

B. Os.	B. O. Rs.	I. Os.	I. O. Rs.
9	65	2	60

Prisoners of war 18.

The general health of the brigade during the operations was good. Admissions for causes other than wounds were :—

B. O. Rs.	I. O. Rs.	Followers.
21	45	2

A large proportion of the above were of a surgical nature such as abrasions, contusions, etc.

Diarrhoeal diseases accounted for 7 British and 2 Indian admissions. The water-supply at the Zab and at Huwaish was excellent.

8. The following suggestions for increasing the efficiency of a Cavalry Field Ambulance are put forward :—

(a) The elimination of the walking man.

Under the present organisation, practically the whole of the bearer and hospital establishment, *i.e.*, cooks, bhistis and sweepers are dumped. About 30 bearers should be mounted, as well as all nursing orderlies, ward orderlies and pack store sergeants and havildars. The small number of cooks and sweepers required could be carried in wagons.

During the recent operations all casualties unable to walk or ride were carried to the A. D. S. by fighting men, as the small number of A. B. C., which it was possible to take were employed in the A. D. S. and tent divisions.

9. The necessity of carrying in wagons nursing and ward orderlies, etc., diminished the accommodation for sick and wounded.

(b) More motor transport is required. At present only six lying cases can be carried. The brigade was without motor ambulances from the 25th to the 29th, when lying cases were evacuated from the Zab River to Fathah.

(c) The officers of a C. C. F. A. require two chargers each. A better type of charger than is usually provided, is also necessary.

(d) The class of pony supplied to medical subordinates is not up to the work required, and should be replaced by a better class.

Unit.	Killed.				Wounded.				Wounded and Missing.	Missing.	Drowned.		Totals.
	B. Officers.	I. O.	B. O. Rs.	I. O. Rs.	B. Officers.	I. Os.	B. O. Rs.	I. O. Rs.	I. O. Rs.	B. O. Rs.	B. O. R.	I. O. Rs.	
"W" Battery R. H. A.	..	..	..	..	Lt. J. J. O'Beirne. Capt. H. L. H. Payne (broken ankle).	..	4	..	..	..	..	..	6
7th Hussars.	Capt. J. C. Hallowes Lt. T. Smith 2/Lt. F. C. Dudgeon.	..	14 (1 acciden- tally shot).	..	Lt. R. J. Pro- thero.* Lt-Col. W. Gibbs. Major W. Paget-Tomlin- son. Capt. V.E. Holland.* 2/Lt. A.W. Roberts. 2/Lt. C. A. Taylor.	..	61	..	..	1 (Believed killed.)	1	..	86
Guides Cavalry.	Lt. W. F. Jackson, I. A. R.	1	..	3 (1 died wounds).	Lt. C. P. J. Prioleau. Capt. I. W. Jones, R. A. M. C.	..	..	25	..	..	..	..	32
23rd Cavalry.	Major J. B. Egerton. Lt. R. I. Wil- liams.	1	..	12	Capt. C. A. M. Paske. Capt. N. E. Marriott. Lt. R. G. Mor- rison, I. A. R.	2	..	26 (1 injured).	1	..	..	..	47
25th M. G. Sqdn.	..	..	3 (2 died wounds).	..	..	..	1	..	..	..	3	1	8
"W" Ammun. Column.	..	..	..	..	..	..	1	..	..	..	..	1	2
												Total	181

B. Os.—Killed .. 6
 B. Os.—Wounded .. 13
 I. Os.—Killed .. 2
 I. Os.—Wounded .. 2
 B. O. Rs.—Killed .. 17
 B. O. Rs.—Wounded .. 67
 I. O. Rs.—Killed .. 15
 I. O. Rs.—Wounded .. 51
 I. O. Rs.—Wd. and Misg. .. 1
 B. O. Rs.—Missing .. 1
 B. O. Rs.—Drowned .. 4
 I. O. Rs.—Drowned .. 2

181

*Since died of wounds.

No. S. C. 702.

7th November 1918.

To First Corps.

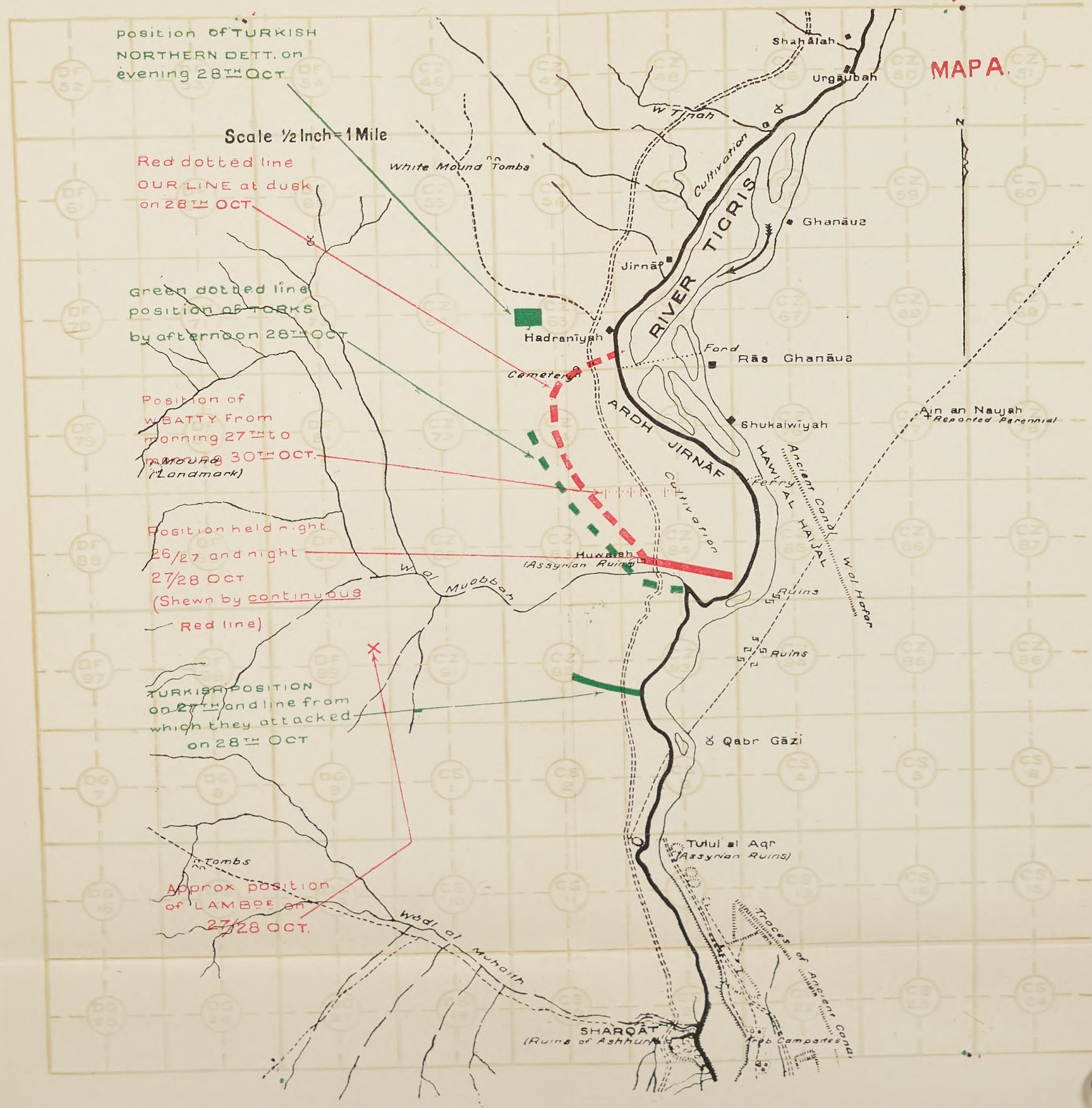
MAP A

Red dotted line
OUR LINE at dusk
on 28TH OCT.

Position of
WBATTY From
morning 27th to
morning 30th OCT.
(Landmark)

TURKISH POSITION
ON 27TH and line from
which they attacked
on 28TH OCT

Approx position
of LAMBOE on
27/28 OCT.

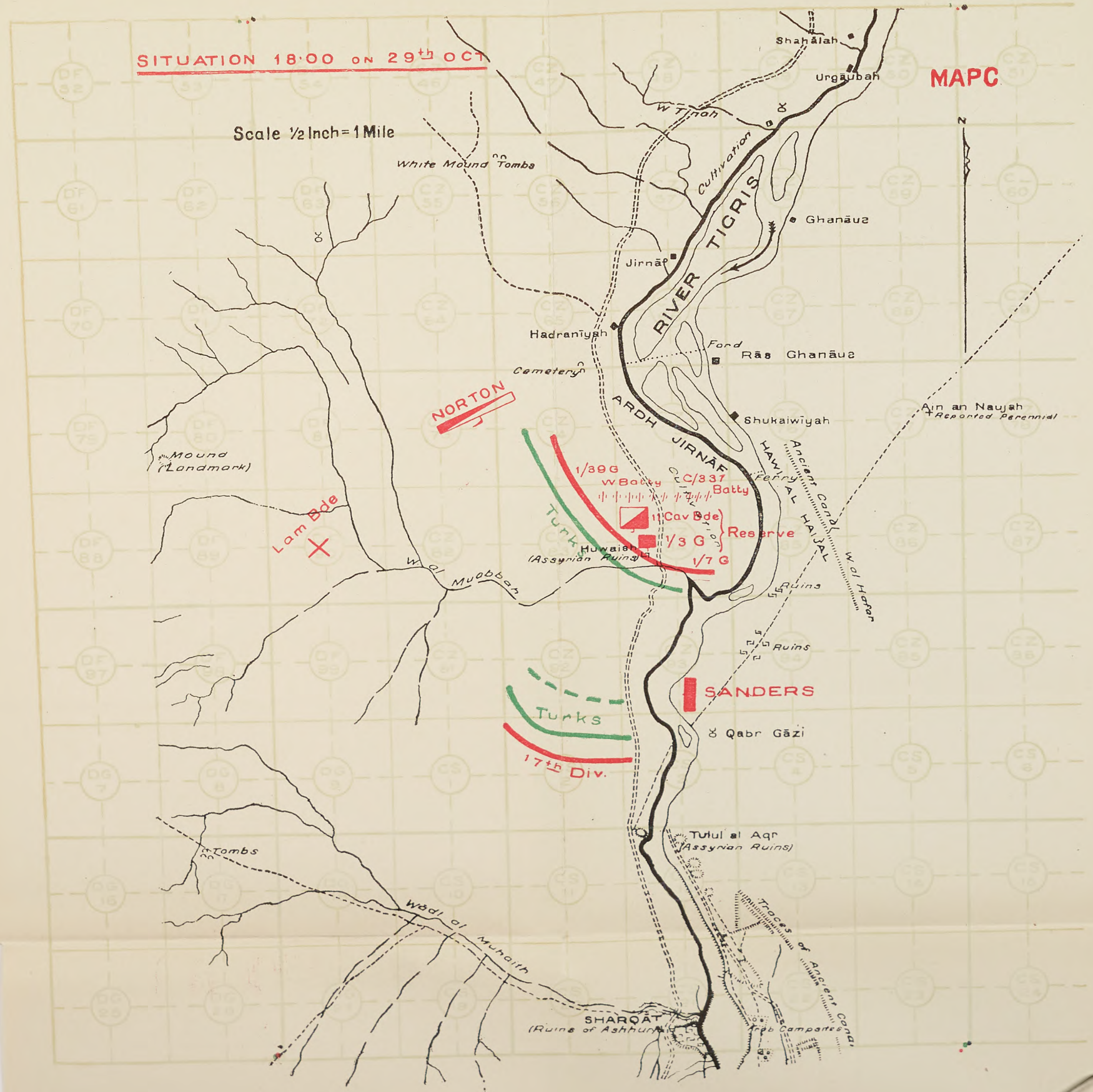


L

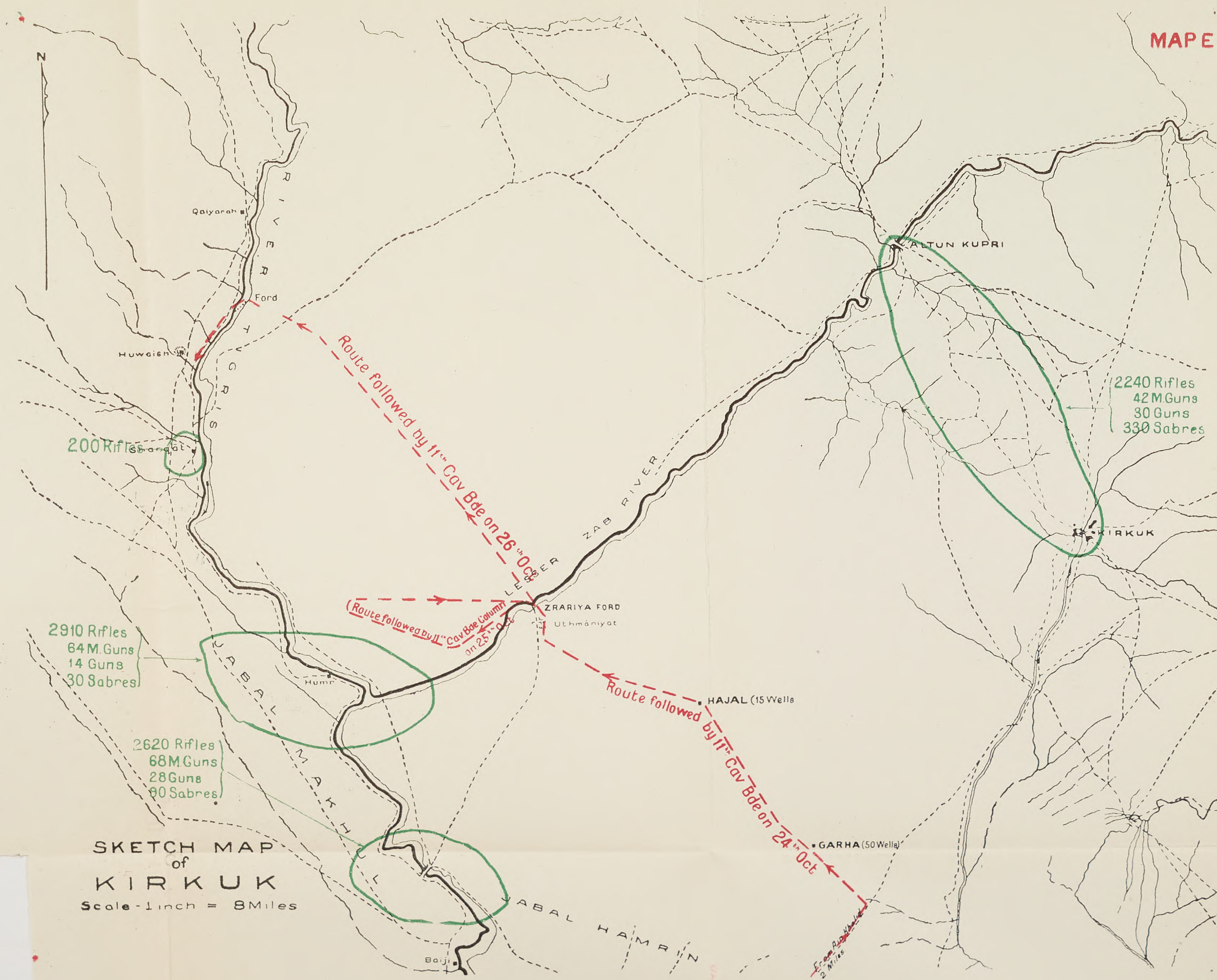
SITUATION 18:00 ON 29th OCT

Scale 1/2 Inch = 1 Mile

MAPC



MAPE



SKETCH MAP
of
KIRKUK
Scale - 1 inch = 8 Miles

AN ATTEMPT THAT FAILED.

By K. G.

An incident in the life of a prisoner of war in Germany.

Much water has flowed under the bridges since November 11th 1918 and even a prisoner of war, whose youthful ambitions were nipped in the bud at the very outset, must eventually put his disappointment aside and smile reluctantly at the stroke of fate which incarcerated him during those four years and perhaps kept him for some other destiny.

The further the long months spent in prison camps recede, the more comic various events in them seem, and one begins to realize that there were happenings which could well form the basis for an amusing story.

A series of events which took place in the prisoners of war camp at Maintz, in the spring of 1916, has often given me food for laughter and I don't think at the time that it occurred to anyone of us who participated in it how ludicrous the whole undertaking was.

This camp was in the old citadel of Maintz and contained some 500 officers, about 100 British, 200 French, 200 Russians and a few Belgians, most of whom had been captured in the early days of the war. It was a very difficult place to escape from and well guarded by a whole company of infantry which was changed every 24 hours. This daily relief precluded any possibility of bribing sentries which was one of the most usual processes of effecting escapes in other camps. Incidentally the sentries were posted outside the barbed wire fence which surrounded the camp and each one was overlooked by his neighbour, so that clandestine conversation with any one of them was impossible.

Various ways of escaping had been elaborated since we arrived in the camp in May 1915, but no one had ever succeeded in getting out of it. The Germans were always very much on the alert because most of the original prisoners of war, being regular officers, were considered valuable prizes as potential instructors of the new armies. Moreover, Maintz is only some 130 miles as the crow flies from the lines around Verdun and the firing there was audible when the wind was from that quarter, and the camp was used as a depot for the French officers captured on that portion of the front. All

this kept the reality of the war firmly fixed in the minds of our warders and the slightest laxness on their part was punished by immediate despatch to the front—a punishment which the class of man who guarded us dreaded as much as the death sentence.

Hence by March 1916 many of us had begun to despair of ever effecting an escape. By this time the efforts of the neutral embassies in Berlin, to cause a slight improvement in the treatment of prisoners of war, began to take effect and the camp authorities decided to extend the area of the camp and include within its bounds a gun-shed as a recreation room, which would be open to us by day, though closed after evening roll-call at 5-30. This gun-shed was to be divided into two rooms by a wooden wall—one-third of it being reserved as a silence room and the other two-thirds as a billiard room, with a bar in one corner at which a trusted German N.-C. O., who was permanently in charge of the building, sold extremely pernicious white wines at prohibitive prices.

This building was a great boon to all of us, as up till then, we had had no place to read or write except our sleeping rooms, which were horribly overcrowded, and in all of which nationalities were mixed up, French, British, Russian and Belgian. By doing this the Germans hoped to cause enmity between us, but, needless to say, the very reverse was the case; although there were times when one longed for a few minutes to oneself.

From the British point of view, however, the new building was of less value than to our allies. The billiard tables were French or Russian and the silence room was always crowded by very senior allied officers who considered it essential to admit no fresh air to their quietude. At this time the principal amusement of the younger ones among us was a race-game, the name of which I forget, but in which you selected and backed your horse and it advanced by throw of dice over a steeplechase course, being penalised or disqualified for landing on or underneath any of the obstacles. The German authorities were only too delighted to see us kept amused by some such harmless distraction as it meant less worry for them from attempted escapes and other petty annoyances. We simulated the race-course atmosphere as much as possible and had our book-makers and tipsters who soon developed prices which would have been the envy of their confrères at Home. Eventually the camp authorities were persuaded to allow us to partition off a portion of the billiard

saloon along the wall of the silence room at the end furthest from the bar and reserve it exclusively for this game. The partition was three-quarters the height of the shed, and in order to increase the reality of the racing atmosphere, we were permitted to have a wooden grand stand erected against the silence room wall. This grand stand consisted of four wooden steps each about 2 feet above the other and about fifteen feet long and 18" broad. On these we sat and watched the racing, made our bets, and did our best to imagine ourselves on a racecourse at Home. For some days this created enormous amusement and large crowds of all nationalities of prisoners took part. The noise was tremendous, the heat terrific and the excitement intense. Meanwhile about six of us—all British—were much occupied with plans for escaping. We had explored all the buildings most carefully but to no purpose, and at this moment were toying with the idea of escaping dressed up as German officers. We had established communications with Home by means of a very simple code and had arranged to have the material for a German officer's uniform greatcoat sent out inside cushions, and one of the party who was very expert with chisel and paint brush had copied the German epaulettes and cap badges most accurately in painted wood. This plan was maturing when the possibilities of the newly opened gun-shed and the grand stand revealed themselves to us. On the outside of the gun-shed was a road leading to Camp Headquarters, then a barbed wire fence, then about fifteen feet of waste land, where a sentry was posted, and then a cliff. One of us who had had to visit a doctor in the town had noticed as he returned that this cliff was about 20 feet high and the ground below was used as a chicken farm. In an ancient guide-book to Maintz citadel which we had procured, we read that there used to be a tunnel leading from about this part of the citadel down to the river, which was a few hundred yards away, and so, after a council of war, we decided to dig a tunnel from under the grand stand, at a depth of about 10 feet, and aim for the chicken run, hoping to strike the ancient tunnel *en route*. We thoroughly realised the noise that the arrival of six human beings into a hen-roost by night would make, but decided that the risk was well worth taking, especially, as there was a chance of striking the old tunnel. We reckoned that we should have room for about 440 cubic feet of earth under the grand stand, and, as the tunnel would only be 35 feet long, about 3 feet high and one foot

wide at the top, increasing to three feet wide at the bottom, we should have plenty of room to spare.

Having formulated our plan we wasted no time in getting started, but difficulties presented themselves at every turn. First of all secrecy was essential. In every camp a large proportion of the prisoners had no occupation whatsoever and so busied themselves with the affairs of others, with the result, that it was extremely difficult to carry out the minute preparations necessary for an escape. Once one had selected the weak spot in the defences one had to have a close look at it. This usually meant that some one of the other five hundred who happened to be looking in that direction, having nothing else to do, put 2 and 2 together and told his friend in strictest confidence what he surmised. The next day every one in the camp glanced at the spot as he passed it and wore a conspirator's look and by the evening the ever-watchful German placed a sentry at the point of interest and another possible exit was blocked! Imagine what our difficulties would be in a task which involved several weeks' work.

Secondly, we had to get underneath the grand stand and this meant making the top of one of the wooden steps removeable! Here our difficulties were to get at the step when no one else was present and to avoid arousing the suspicions of the German barman, who happened to be a most alert and suspicious person. From the top of the grand stand this man was just visible as he sat at his bar and sold liquor and so we decided that there should always be some one in this position, reading, or watching the race-game, to accustom the barman to someone's presence there. We made one or two attempts to move the step but to no avail as the barman was disturbed by the least noise and came to see what was happening. Eventually the problem was solved by a British Officer receiving from home the gift of a ping-pong set. This we borrowed, set it up in the race-game room and began to play during meals when no one else was in the recreation shed. For a day or two the barman found the game of absorbing interest, watched us incessantly and became frantically excited over long rallies and good strokes. Those not playing bought drinks off him and we all made it a rule to make as much noise as possible. Shortly his interest waned and one day during the luncheon hour, two of us played as noisily as possible, two kept cave, cheering lustily from the top of the stand and the other

two succeeded in getting out the long nails from the step, taking it up and substituting short nails. In ten minutes we had so arranged it that we could lift the top on and off noiselessly and rapidly. As soon as this was done W. got under the stand to investigate what was there and we were able to let him out again after a few minutes. We then went off to our room and held a council of war.

W.'s investigation showed that the whole floor was of cement, and it was impossible to judge how thick it was. Our first task, therefore, was to cut through this and our only tools were a hammer and various old pairs of scissors. Our next difficulty was to get in and out of the grand stand and the only possible times were immediately after 9 a.m. roll-call before anyone else came into the room, during the luncheon interval and immediately before evening roll-call when everyone had left the shed and the barman was busy putting away his bottles. Nevertheless we decided to start work next day and begin by going under the stand one at a time with a relief at midday. We arranged alarm signals as follows—one loud knock on the grand stand meant make less noise—two knocks—carry on or all clear—three knocks—great danger, don't move, a continued rubbing on the top board with hand or boot meant I want to talk to you through the boards. We then drew lots for duties and W. had the honour of going "down the mine" first and starting the work, F. was to relieve him at midday, T. had the first spell of "cave" work and L. was his relief. S. and I. constituted the noise party as required. We opened a bottle of wine to the success of our enterprise and really felt things were moving at last.

Next day everything went well, we rushed to the hall immediately after roll-call and began a violent ping-pong match. W. was pushed under the stand without difficulty—except that the aperture was a bit narrow for his large body—and by the time he had got his bearings and was ready to start operations the race-game crowd arrived. T. took up his position on the top of the stand and the remainder of us stood about trying to look as innocent as possible. Then W. got to work and, of course, to us who were expecting it, the clink, clink, as the hammer hit the scissors, sounded very loud but the gamblers did not notice it and the barman carried on his job in equally blissful ignorance. After an hour or so I had a sudden brain wave and went into the silence room to hear how it sounded

there, and to my horror it was just as if W. was working with no partition at all between him and the stolidly reading senior officers. Every blow of hammer on scissors made the whole chamber vibrate and I soon heard one reader enquire of another what on earth was going on outside. This was too much so I returned hastily and signed to T. to warn W. to make less noise, and S. took a turn in the silence room.

All went well till lunch when we started another rowdy ping-pong match on the departure of the gamblers, got W. out without much difficulty and put in F. in his stead. We provided F. with a new pair of scissors and improvised a pad to put on the top of them to deaden the sound of the blows. W.'s clothes on coming out were filthy so we decided to bring some old pyjamas and put them down the mine to serve as working overalls. All went well till evening roll-call, when we extracted F. without mishap, cleaned him up for inspection as well as possible and shut down for the day. We held a council of war in the evening when it was decided to have some one permanently in the silence room. F. reported that the cement was so hard that he and W. had only made the barest impression in spite of eight hours work and the utter ruin of two pairs of scissors. This continued for about a week and we grew very despondent, the first day I went down it took me some time to find the result of the 16 hours work already done, although I knew that the hole was to be within three feet of the outside wall. Stoppages were frequent owing to visits paid to the race-game by German officers and, worse still, by this time the enthusiasm for the game was waning and the volume of noise which emanated from the room grew less. On several occasions the barman noticed the clink, clink, and work had to be stopped till his attention was attracted elsewhere. Usually one of the conspirators had to buy a drink ! At the end of the week we had a stroke of fortune. A German workman was sent into the camp to effect some minor repairs and, though he was carefully guarded by an armed soldier, we managed to steal his hammer and a couple of excellent chisels. This quickened the pace of the work but the cement was terribly thick ; the noise, in spite of pads, seemed to increase and the players of the race-game decreased to such an extent that one morning there was no play at all. We were in a quandary and those outside got more weary making covering noises than the actual worker under the stand. One evening at a council of war a great brain wave came to us. Ping-pong was

again to be our salvation in the following way. Two of us would be on permanent duty to play and the object of the game would be to make the rallies as long as possible and the worker would clink in time to the ping-pong of ball on bat. This worked excellently. The server would announce "Are you ready, one, two, three," and then the worker would clink in unison with his first blow and so on till some one took his eye off the ball, missed, and a solitary clink reverberated through the hall. It took a fortnight to get through the cement, which was five inches thick, and then the interest increased. We now set out to make the hole big enough for a man to squeeze himself down it and dig. We sewed up bags to carry the earth from the hole to the opposite end of the grand stand, where it was to be stacked, and managed to steal a few necessities, such as a night sentry's lantern—it was quite dark under the stand—a couple of shovels and some pointed tools for dislodging earth. By the end of a month we had sunk our shaft ten feet and made it wide enough to squat at the bottom of it and dig. We now worked with two under the stand at the same time and were able to dispense with the man in the silence room. The two on duty divided the work as follows:—No. 1 went down the hole and dug, put the earth into the bags and handed them up to No. 2 who crawled along under the stand, emptied the bags at the far end and packed the earth. When No. 1 tired No. 2 took his place and so on. When possible we had a double relief at midday, but sometimes this could not be done and then the unfortunate pair were left down the mine all day. The final closing down just before roll-call was often difficult but was vital and we never failed to manage it somehow. We also procured some more old clothes and felt slippers to wear while working and kept them under the stand, so that the workers came out fairly clean. There were various moments of especial excitement. On one occasion the alarm was given in the middle of the midday relief, but fortunately at a moment when the relieved couple had got out and before the relieving pair had started to climb down. We put the board back just in time and were sitting on it when the German officer of the day entered. On another occasion an extremely fussy general and his staff came to inspect the camp. We had a day off on inspection days as they entailed sudden roll-calls, and, on this occasion, were sitting nonchalantly on the scene of our operations when he visited the recreation room. He examined our ping-pong rackets

with great interest, poked his nose into every corner and to our horror noticed the loose board in the grand stand. He cursed all and sundry with Teutonic violence for not having this put in order for his visit. The camp commandant grovelled, promised that the camp-carpenter should be punished and the matter put right immediately, but fortunately it was forgotten. On another occasion I was sitting as guard on top of the stand, when, to my horror, a German civilian arrived carrying a bucket of water and scrubbing material and accompanied by the inevitable armed sentry. He informed me that he had been instructed to scrub the grand stand. I immediately volunteered to assist, saying I had nothing to do, but the sentry, no doubt suspecting some form of bribery, refused my proffered help and told me I should be severely punished if I spoke to a civilian as this was "streng verboten." However, this conversation had the effect of so frightening the civilian that he started work at the furthest corner of the stand from that on which I was seated. I gave the alarm (3 knocks) at once and repeated it at intervals, but unfortunately the civilian started rubbing the boards which was the signal for conversation and I could hear L. (who was working below) whispering up, "Yes, what is it?" I continued knocking and yelled to friends in the billiard room at the top of my voice that they scrubbing the grand stand. This brought a crowd to watch and the sentry growing nervous began a loud conversation with the civilian. Eventually L, gathered something was up, kept quiet and all passed off successfully, but it was a bad half-hour and incidentally L. and his companion below were drenched by the water which the civilian poured over the boards. Just before this we had had to put paper all along the inside of the grand stand to prevent the earth leaking out of the cracks.

By the end of another week we had progressed some six feet towards our destination, averaging about a foot a day. At first our advance was very slow as the ground was extremely hard and our implements were poor. Also we encountered large boulders which were very hard to move, but later the digging became easier and all went well till one day a great slab of the roof of the tunnel fell in. I was working at the time and it was a most unpleasant sensation and made it obvious that we must get something down to support the roof as we were already under a road and heavy traffic to and from

camp headquarters passed over us. Again ping-pong came to our aid. The craze for this game had increased in the camp and there were several tables in different rooms and one which belonged to one of the conspirators. We therefore stole a saw and cut this table up into suitable lengths, each six inches wide, and set these up in the tunnel in pairs leaning against each other and a foot apart. It was no easy task to get these to the tunnel and they had to be carried tied round the waist under an overcoat. Incidentally the weather was peculiarly hot about this time. Everything seemed to be going according to plan and we were beginning to mobilise our kits for the trek across country when a most untoward stoppage occurred. F. was working No. 1 and I was No. 2 waiting for some bags to be handed up when he suddenly came to the bottom of the shaft and whispered that the wall in front of him had fallen in and he thought we had struck the old tunnel leading to the river. You can imagine our excitement. He went back to investigate and returned shortly saying he couldn't make it out. The place he had got into seemed to have no exit and the atmosphere was so awful that the lantern went out, no light would burn and he was almost overcome by the fumes. I took his place and found that the entrance he talked of was about 2 feet 6 inches square, and, after trying in vain to light the lantern and strike some matches, I crawled in—I could feel two walls composed of long slabs of stone on either side of me and after progressing some six feet I bumped my head against the wall at the end. To my intense annoyance I found this also to be composed of large slabs of stone. I then started to dig down and immediately unearthed something like a football. I took it out and found it to be a skull! We had struck a tomb. By this time I was feeling far from well and so came up and on consultation with F. we decided to strike off at an angle and use the tomb for storing earth. We were both feeling intensely sick, and, fortunately, the midday relief took place soon afterwards. We hastily explained what had happened and W. and T. went down to carry on the work. We let them out at 5-30 and by this time F. and I were feeling really ill. W. and T. reported the atmosphere down the tunnel as rather bad and it was noticeable in the recreation hall as well. They had, however, filled the tomb with earth and reported good progress. The next morning all four of us who had been down were ill with the most painful sore throats and we were laid up for three days and the work was delayed in consequence.

By the end of six weeks' work we reckoned that we had completed rather more than half of our task. Everything was working easily and well and on some days we were advancing so much as three feet. We thought we should be ready in another ten days and this would get us out in the second week in May. Our kits were ready and mostly stored under the stand. We had also stolen an electric torch (these useful adjuncts to escaping were forbidden fruit) which was of great assistance.

Little did we know what a bombshell was in store for us. It is easy to be wise after the event, and on looking back I can see the various reasons which had made the Germans suspicious. Parcels and letters were frequently arriving from England and neutral countries and most officers were easily accessible when the censor wanted them ; we, however, were sometimes not to be found. On one occasion they were looking for L., could not find him and so had a sudden roll-call and we only got him up just in time. Then there were the various thefts of articles which would be found in most burglar's equipments, and then, no doubt, there were times when we looked very guilty. We had had to admit several other prisoners to our secret usually because we thought they had guessed it, and they helped us most loyally. We arranged with them to close the tunnel at its exit after using it and gave them the chance of following us after 24 hours.

Anyway, we learnt afterwards that the camp commandant wrote about this time to headquarters, that he suspected something was afoot among the British Officers, and recommended our immediate removal to a camp further in the interior of Germany. Headquarters concurred and so the very next day the bugle went for roll-call at 4 p.m. The couple on duty were extracted from the tunnel just in time and got on parade, and to our horror the interpreter read out that all British Officers were to be ready to leave the camp by 11 next morning and be on parade by 10-30 a.m.

We were dumbfounded—all our labours in vain. However, we held a meeting and decided that there were only two courses open—either to hand the tunnel over, lock, stock and barrel to our allies or to go down it the next morning, have ourselves nailed in and dig our way out. We reckoned that there were about ten more feet to finish. We soon discovered that our views differed and after

much discussion, W. S. and I decided to go to the new camp with the possibility of escaping *en route*. F. L. and T. decided to go down the mine and dig for freedom. We spent the evening filling the stand with provisions and W. S. and I removed our kits. The Germans were rushing about all over the place and our allies arranged a concert in the recreation hall by special permission to bid us farewell. We got to bed late and at 8 a.m. the following morning there was an unexpected roll-call. Guards round the camp had been doubled by night and all of us were present at this parade. As soon as it was over we put F. L. and T. under the stand, but, unfortunately, they decided not to have the loose board nailed down so that they could come up and stretch their legs by night when the room was closed and empty.

This was their undoing.

At 10-30 the fateful roll-call took place and F. L. and T. were found to be missing. We all denied any knowledge as to their whereabouts and the Germans were furious. They knew they had been on parade at 8 a.m. and could not have escaped from the camp in the interval. However, the officer and escort arrived to take us to our unknown destination and we were duly marched off and put into our train. After numerous delays we reached Frankfort and were told we had to wait an hour.

Three-quarters hour had elapsed when to our horror we saw a jeering crowd approaching us. In the middle of it were some German soldiers escorting our poor friends L. T. and F. who were dressed only in the tattered pyjamas they had been digging in. They looked extremely disconsolate and the crowd was doing its best to increase their discomfort by taunts and missiles.

They were put into solitary confinement in our new camp, Friedberg, tried by court-martial and punished with a term of imprisonment. On their release L. and T. were sent to other camps, but F. returned to us and we heard what had happened.

As soon as we had been marched out of the camp pandemonium broke loose. All prisoners of war were sent to their rooms and a special company of soldiers was borrowed from the town garrison, marched to the camp and told to search it until the missing officers were found. All possible precautions outside the camp were taken and the whole countryside was scoured.

The search in the camp lasted fully two hours, the recreation hall was visited and revisited but no one suspected the grand stand. F. L. and T. were laughing up their sleeves and thinking what fools we others had been. At long last a solitary soldier came into the hall, "fed up" with the whole business and grouching to himself. Unfortunately he sat down plump on top of the loose board, noticed that it moved, lifted it up and the Maintz tunnel was discovered ! L. T. and F. surrendered and tried to come out but the soldier started yelling and screaming and pointed his rifle at them. Officers and men rushed up from all directions, orders were shouted out and amidst unheard of chaos and under a battery of revolvers and bayonets our poor would-be escapees were permitted to crawl out and immediately seized. The grand stand was smashed to atoms by the infuriated soldiery and a particularly daring man went so far as to venture down the tunnel. It is not recorded whether he received the Iron Cross for this display of valour, but his explanation on return seemed to excite the Germans to further frenzy and the lives of L. T. and F. were in great danger when one of the German officers rapped out a command, silenced his soldiers, and turned to his three prisoners with a look worthy of his pompous and theatrical emperor and pointing to the debris of the grand stand said, "Gentlemen, this was built for use, not abuse."

A HUNDRED YEARS OF HIMALAYAN EXPLORATION.

(A lecture delivered in Simla on 2nd August 1928, by Major Kenneth Mason, M.C., R.E., Survey of India).

I am using the term Himalaya tonight in its widest sense: Not merely "the Abode of Snow," nor yet the great range of high peaks that geographers call the Great Himalaya. I include the whole complex series of parallel ranges, of immense tablelands, of intricate valleys and of mighty rivers which stretch for 2,000 miles from Afghanistan to Burma and for over 500 miles northwards from the plains of India. Collectively they form the greatest physical feature on the earth. Put together all the ranges of Europe, great and small, and include if you like the Caucasus and Urals, and you will not get a mass comparable to the Himalaya. Set down the western end of the Himalaya at London, the eastern end would lie beyond Moscow. Plant the Jungfrau on the summit of Mont Blanc, or pile eight Snowdons one upon the other and you will get some idea of Everest.

In one hour it is only possible to outline very briefly the geographical story of the last hundred years. I shall begin a hundred years ago and to make my subject clear I shall divide the period into five parts:—

- (i) The First period of Adventurers.
- (ii) The Advent of the Survey of India.
- (iii) The Indian Explorers.
- (iv) Modern Adventurers.
- (v) Modern Scientific Exploration.

Each of these periods covers about 20 years.

A hundred years ago Sir George Everest was Surveyor-General. The map of India was, as far as the north was concerned, not far advanced from the great atlas compiled by James Rennell in 1790. It was made up of isolated journeys and small patches of reconnaissance sketches based on rough astronomical data collected and pieced together as well as possible. Places were frequently as much as forty miles out in position. The Great Trigonometrical Survey of India had come into existence in Madras, and William Lambton, the first Superintendent, had brought his framework to Central India. He had just died, a veteran of 70 at work with his telescope, and George

Everest his enthusiastic successor was carrying the work forward toward the mountains.

Something was known of the Himalaya but not much : enough to fire the enthusiasm of a few adventurers. Warren Hastings had been interested enough to send Bogle and Turner by Sikkim and Bhutan to investigate trade possibilities with Tibet. Thomas Manning, disguised as a Chinese doctor, had reached Lhasa and been cast out. But west of this, Nepal, Kumaon, Ladakh and Kashmir, to say nothing of almost the whole of Central Asia, were practically unknown. The great Ganges was shown on Rennell's map as rising north of the great range and tunnelling under it, and Raper and Webb had been sent by the East India Company to investigate this extraordinary phenomenon. The mysterious Moorcroft had already attained notoriety by reaching Gartok and by being captured and imprisoned by Tibetans "at the northern foot of Himalcha mountain." Over hundred years ago in fact begins about the time that Moorcroft offered to sell Ladakh to the Company. The offer was refused, I believe, for three reasons ; first, the Company was not quite certain where Ladakh was ; secondly, Ladakh would not have been much use without the Punjab ; and lastly, Ladakh wasn't Moorcroft's to sell. Moorcroft is said to have been so disappointed with his treatment that he migrated to Lhasa in disguise and was murdered there some 12 years afterwards.

To sum up : not much was known of the Himalaya a hundred years ago. Our great-grandfathers had a general idea of the political divisions and they knew that Lhasa was north of the mountains. But I am quite certain that no one would have placed Lhasa in roughly the same latitude as Delhi.

I cannot spend much time on the early adventurers. I will mention only the travels of Vigne in Kashmir about 1835, and of Wood to the Pamirs in 1838 and his discovery of Lake Victoria, one of the Oxus sources. For the most part the adventurers of this period flit across the Himalayan stage with interesting but not always creditable records. By their route reports and their rough sketches they added to our knowledge. In this period a few sportsmen entered the hills from Simla or Mussoorie in search of game, and there was a sporting adventurer or two in Kashmir ; but their records are difficult to trace. The period closes with one outstanding event.

Everest, the Surveyor-General of India—"Never Rest" as he was called in the Survey, for he carried out his work even when paralysed in both legs, and was lifted in and out of his observing seat by pulleys—Everest, I say, pitched his camp at the northern end of his great scientific framework of India. At Banog near Mussoorie he completed his life's ambition. He looked back over the plains of India, and saw the monsoon come up to the hills. He laid out our northern baseline and made Mussoorie into a station. He constructed many of its roads out of funds derived from his "Lake allowance." Now Mussoorie was well explored in those days. It neither had then nor has now any lakes. That a Surveyor-General could successfully draw such an allowance gives us an interesting glimpse of the Company's knowledge of the hills. It also shows us a delightful little lapse on the part of the Company's Audit Department. Everest also gazed across at the great white rampart of snows, and vowed that one day the work, which his predecessor had begun, would cross it.

My second period is from about 1845 to 1865. With the advent of scientific survey a new era began in the exploration of the hills. Chains of primary triangulation were run along the foothills: this primary work lasted from 1846-1855, and was of very great accuracy. It was during the computations of the north-eastern observations that a babu rushed on one morning in 1852 into the room of Sir Andrew Waugh, the successor of Sir George Everest, and exclaimed: "Sir, I have discovered the highest mountain on the earth." He had been working out the observations taken to the distant hills. It was Sir Andrew Waugh who proposed the name Mount Everest, and no local name has ever been found for it on either the Tibetan or the Nepalese side. *Mount Everest in fact has no local name*, and no amount of questioning Tibetan mule-drivers will find one. The little boy was wrong, when he replied to the question "Who named Mount Everest and why?" "General Bruce, because he said, when I get to the top I shall 'ave a rest."

Everest is the only peak to which the Survey of India has given a personal name: and this name has now been accepted for over 70 years. The name *Godwin Austen* for the peak K₂ was proposed in England in 1888 and still appears on some unofficial maps, but it was not accepted by the Survey or Government of India, nor have others, which have been proposed by private explorers. I should

perhaps state that Makalu, the fourth highest peak in the world, and the south-eastern outlier of Everest, is believed by some to be named after Macaulay. The name is not known locally and I am unable to say definitely who named this peak or when.*

Nepal was then and has remained until recently a closed country to scientific exploration. Sir Andrew Waugh, however, had plenty of new ground to deal with. The newly acquired territory of the Punjab afforded a fine opening, and the exploration and survey of Kashmir was taken up. Mountaineering was a haphazard pursuit in those days: even the Alps were dreaded and not properly mapped. I believe it is a fact that our predecessors mapped Kashmir and Ladakh, Lahul, Spiti, Kulu and Kumaon before the Swiss had a complete map of their Alps. During this survey 37 mountains, over 20,000 feet were climbed and observed from with the theodolite and five over 21,000. The world's altitude record was held for 20 years by a khalasi of the Survey of India on about 8 rupees a month, who in 1860 carried a pole to the top of Shilla, a peak east of Spiti, 23,050 feet above the sea. That khalasi did not measure the height of the peak himself!

I will mention two leaders of these surveys, Montgomerie and Godwin Austen. Montgomerie was the organizer, the brain and the scientific triangulator. He planned the great network that covered the mountains. At the station of Haramukh in 1857 he entered his observations in the direction of the Karakoram range under the peak designations, K_1 , K_2 , K_3 , &c. When these were computed, K_2 was found to be the second highest mountain of the earth. Godwin Austen was the fearless explorer, the enthusiastic pioneer, geologist and artist. He was probably the greatest mountaineer of his day, and some of the glaciers he trod, and the passes he crossed have never since been visited. He was the first to view K_2 from close quarters. Four years ago I was staying with him in England. At over 90 years of age his story kept me fascinated for a whole afternoon without a break. Less than two months before his death his mind was as clear as crystal. He discussed with me the plans I then was formulating.

*Major H. T. Morshead, of the Survey of India, who accompanied the first two Everest Expeditions, thinks that *Makalu* is a corruption of Kama-lung, from the Kama Valley which it overlooks on the north, or possibly of Khamba-lung from the Khamba district of Tibet, which it adjoins. This is borne out by an old panorama drawn by the explorer Rinzin Namgyal in 1884, where the mountain is figured: "Peak XIII, Khamba-lung, 27,790 ft." Colonel Tanner of the Survey was however at that date already using the word "*Makalu*."

Of the various assistants who worked under Montgomerie and Godwin Austen, I could mention many. But I feel I must confine myself to one: W. H. Johnson. This man was born and educated at Mussoorie, where he grew up a somewhat hot-headed youth. But he was bitten by the mountain germ early. In 1851 he carried out a difficult triangulation connection between the Bhagirathi and Sutlej. Three years afterwards he succeeded in completing the reconnaissance survey of the Baspa region, over the snows you see from Simla, after the failure of two previous survey efforts. He rapidly rose in the Department. During the survey of Kashmir, he twice observed from over 20,000 feet in 1861 and seven times in 1862, and his four highest stations of observation I believe still hold the world's record as such. Unfortunately the more Johnson saw of the snows the further he wanted to go. He applied to the Government of India to let him explore into Central Asia. Hearing unofficially that his request was going to be refused, he secretly borrowed Rs. 15,000/- in Dehra Dun and Mussoorie, crossed the Kun Lun Range by two unknown passes, and reached Khotan, where he stayed with the rebel ruler Habibullah. He was detained and only got back with difficulty. It was a very fine performance, but unfortunately Johnson did not stick to facts on his return, his survey work was somewhat imaginary, and he left the Survey of India to take up the Governorship of Ladakh, where he was foully murdered. It is a curious fact that for many years both the Alpine Club and Geographical Society blamed the Survey of India and the Government for not fully appreciating Johnson's services. A remark of the President at a meeting of the Alpine Club led me to investigate the whole of Johnson's story and I then found that General Walker had done his best to cover up Johnson's shortcomings, that he had moved Government to pay Johnson's debts and ransom to the extent of Rs. 16,400/- in addition to the cost of the journey; and that it was Johnson himself who overstepped the bounds of prudence by "soliciting H. E. the Viceroy to confer on him such a pension as would enable him to live in comparative comfort for the rest of his life"; while still a comparatively young man. There was a Finance Department even in those days.

Of the non-official and semi-official element of this period I will only mention the two Schlagintweits, one of whom was murdered in Kashgar in 1857, the two Stracheys, Richard and Henry, Dr.

Thomas Thompson and Alexander Cunningham, the last three of whom wrote valuable reports on Ladakh and Kumaon, and who were collectively responsible for the rough delimitation of the south and east boundary of Ladakh.

I leave this 20 years with the remark that the greater part of the area within the Indian borderland west of Nepal had been explored, and a good reconnaissance map made of most of it.

I always think that the third period, 1866 to 1886 is the most romantic—the period of the Indian explorers. Regular survey had nearly reached its limits. Chinese Turkistan was in a very unsettled state. The Tungan rebellion had broken out in 1863. Tibet had retired into a state of exclusivism and aloofness. The Indus valley tribes were actively hostile and Hunza Nagar openly predatory. Our trans-frontier maps were still a blank, and within our borders the survey of certain parts was abandoned. From the Black Mountain on the south to Bunji, the Indus was unvisited; Gilgit, Chitral and Chilas were unexplored; Yarkand itself was 200 miles wrong on the map; Central Tibet was a complete blank. The position of Lhasa was still conjectural and only one point of the Tsanpo was charted.

Montgomerie and Walker of the Survey of India now set about training Indian explorers to lift the veil. These were engaged at the princely salary of from Rs. 16 to Rs. 20 with promised rewards for good work. The details of some of these journeys are of extraordinary interest, but I can only mention a few. The first of these explorers, Nain Singh, a schoolmaster in Kumaon, was enlisted and taught survey. He was the son of the man who had rescued Moorcroft in 1812. His first effort to penetrate Tibet through Kumaon was a failure; his second through Nepal met with better luck. After finding himself penniless in Tibet, he joined a caravan going to Lhasa and reached this place in January 1866. Here he earned a scanty living as a teacher of accounts, and afterwards made his way back to India. He brought back a map of the southern trade route of Tibet and a sketch of the Tsanpo for 600 miles, besides a valuable report.

Other pandits were now engaged and despatched. Some elected the disguise of traders, some went as lamas, some as mullahs. The mullah had a little compass which pointed the way to Mecca! and the trader carried drugs that cured diseases! The lama surveyor

walked on foot with his rosary counting his beads, and his paces. At the end of a hundred paces he would swing his prayer wheel "Om mani padmi hum" "Oh Jewel of the Lotus arise," and inside the prayer wheel a hundred paces were recorded. I may mention that the Tibetan rosary has 109 beads, while the survey pattern had exactly one hundred!

These pandits were mostly known to the world by two initials, generally the last sounded letter and the first. Thus Krishna, or Kishen Singh, was known as A K., Kalian Singh, GK., Abdul Subhan, NA. A few were known by titles: Nain Singh was always the Pandit; Ata Mohammed, the Mullah; Mirza Shujah, the Mirza. It was one of these men, Hari Ram, MH. who in 1871-2 made the first circuit of the Everest group.

Nain Singh's greatest journey was in 1874 when disguised as a lama he succeeded in traversing the whole of Tibet from Ladakh to Lhasa by the great northern route. He was nearly caught out at Lhasa, but eventually got down to India by Bhutan.

Personally I always look upon Kishen Singh, or A K., as the greatest of our explorers. I will pass over his first two journeys, valuable though they were. His third and last commenced at Darjeeling in April 1878. After reaching Lhasa he started northwards for Mongolia. He met with desperate hardships, was robbed by bandits, stripped and deserted by all his men save one, Chumbel. In spite of adversity he pushed on and reached the extreme N.-W. confines of Kansu, carrying out his survey all the while. All trace of him was lost in India and hope was given up, when 6 years after his departure the worn-out traveller returned. His health was broken and it was doubted whether he would survive. You will be glad to know he drew his pension for 30 years.

Both Nain Singh and Kishen Singh received honours from the Geographical Societies of Europe and generous grants from the Government of India. I wrote a short history of these men for the R. G. S. a few years ago and in looking up their old records I found the terse remark in Kishen Singh's: "accurate, truthful, brave, and highly efficient." Time has endorsed all four qualities.

I must not give all the credit to the Hindu explorers. Our knowledge of the north-west was gained by much the same means, but naturally Mahomedans were employed here. The most interesting of these was Ata Mahomed, "the Mullah." He was a well-educated

native of Peshawar, versed in Arabic and the brother of a sapper murdered in Swat in 1869. His greatest exploration work was up the wild gorges of the Indus from the plains to Bunji, and our map almost till today rested on his work. He also gave us our first map of Swat, which survey he undertook in the disguise of a timber merchant. These surveys have only just been superseded by modern work carried out in the last three years. Then there is Mirza Shuja, who as a lad served under Eldred Pottinger in Herat. To him we owe a map of northern Afghanistan and the Pamirs. He then became tutor to the sons of Sher Ali at Kabul, afterwards rejoining the Survey of India ; but he never returned from his last expedition being murdered with his son-in-law by his guides.

One more instance of the Indian explorer before I leave this period. By 1879 the general course of the Tsanpo of Tibet was known, but its identity with the Brahmaputra of Assam was not proved. Captain Harman of the Survey of India in that year trained a Chinese lama as an explorer and sent him into Tibet. The lama was told to follow the river down as far as possible, and then to mark and throw logs into it. For two years Harman had the rivers of Assam watched. No logs arrived, Harman went sick and the watch was abandoned. Four years passed. Then a hill Indian named Kintup, who had been in the service of the lama returned from Tibet and asked for the survey authorities. He told his story : how the lama had taken to a life of ease and sold him into slavery : how he, Kintup, had worked for his freedom and made his way down the Tsanpo : how he had been captured and had escaped to continue his journey. He detailed a series of places he had passed to the spot where he declared he had cut logs and cast them into the river, in the hope of carrying out the original orders. The Survey of India believed him, but his story was not generally credited and it was many years before it was proved true. Kintup was then sought out by the Surveyor-General, Sir Sidney Burrard, and suitably rewarded for his courage and determination of thirty years before.

I am spending much time on this period. I might mention the names of Shaw, of the members of the Forsyth mission to Kashgar, and of Colonel Woodthorpe. More openly than had previously been possible they sketched the Karakoram trade routes, Chinese Turkistan, Hunza Nagar, Chitral and the southern Pamirs. They had few fixed points to work from and most of their work has been superseded.

I must, however, allude to Hayward's tragic end in 1870. He was exploring the remote district of Ghizar, near the Darkot Pass north-west of Gilgit. The tribes became hostile, but he persevered. At last the climax came and he learned that the local tribesmen intended to murder him. He dared not rest or lay down for nights, and sat up in his little tent with his rifle across his knees. At last he fell asleep, and the tribesmen rushed in and secured him. He asked to see once more the sun rise over the mountains, and was allowed to climb a hill by his camp. Then he turned his back on the sun and was butchered in cold blood.

I must now turn to my fourth period, 1885-1905, and it becomes increasingly difficult to select my stories from the growing mass of material. In this period, the mountains became more settled and we have expeditions organised from Europe lending a hand. We have Sir Francis Younghusband's adventurous crossing of China from Peking to Kashmir, and Sir Martin Conway's climbing expedition in 1892 with the introduction of Italian guides to the Himalaya. We have Sven Hedin, the Swede, and Littlehale and Bower all attempting to get to Lhasa, and the latter's successful man-hunt into Central Asia. The story of this perhaps bears repeating. One Dad Muhammad, a Pathan trader of Leh, was camped beside an English trader, Dalgleish, on the Karakoram Pass. After a friendly greeting he treacherously murdered Dalgleish, sacked his caravan and fled into Central Asia. Bower, on a shooting trip in Ladakh, received prompt orders from the Government of India to pursue the murderer and bring him to justice. I have already pointed out that Central Asia is some size. However, Bower hunted Dad Muhammad all over Chinese and Russian Turkistan, and eventually drove him into a well-laid trap in far Samarkand. Dad Muhammad was seized and imprisoned; and while the Foreign Offices at London and St. Petersburg were arguing his extradition, he hanged himself in his cell. The long arm of British vengeance had not been forgotten when I was told the story on the Pamirs 23 years afterwards.

The Survey of India policy about this time was to attach surveyors to various explorers and to military expeditions. Thus Atma Ram went with Bower on his journey in Tibet, and Deasy, Rawling and Stein all had surveyors to map the country they passed through. Our numerous little frontier wars also gave us the opportunity of improving our maps of the north-west. An uncle of mine,

A. H. Mason of the Intelligence Branch, and Wahab of the Survey of India were closely connected with this work. The Pamir Boundary Commission of 1895 gave us an accurate map by Holdich and Wahab of the Great Pamir. I shall close this period with a mention of the Tibet Mission which from a geographical standpoint gave us a map of the Brahmaputra upwards to its source, by Ryder and Wood of the Survey of India.

Before commencing my fifth and last period, 1905 to 1925, I will put on the screen a chart which will give you some idea of the activities of explorers in the third and fourth periods. It represents forty years of travel. But vast though those journeys were, they are not enough, and we aim at getting a map based on fixed points. The greater part of the area was at the beginning of this century much as was the map of India in the time of Rennell. It consisted of journeys pieced together, with caterpillar-looking mountains in between. The beginning of this century saw a great increase of accurate knowledge and a demand for more accurate knowledge, and for contoured maps. Early in our final period I must mention Sir Aurel Stein's second expedition into Central Asia. Though his object was primarily archæological, both he and the two surveyors he took with him accomplished a vast amount of geographical exploration.

In 1909 further expeditions from Europe under the Duke of the Abruzzi and Dr. Longstaff added to our knowledge of the northern boundary of Kashmir; while about the same time a complete new survey of Kashmir itself was undertaken by the Survey of India. Our Indian primary triangulation was taken through to Gilgit and during 1911 and 1912 the work gradually progressed towards the Pamirs. In 1912, Lieut. Bell, who was in charge of the work, died, and his monument lies on the Pamirs. In 1913 I completed the work with the Russians on the Russo-Chinese frontier at Sar-bulak, at the extreme northern point of the Indian Empire, 17,000 odd feet above the sea. The error at the junction, as Sir Geoffrey Corbett has said, was less than 2 yards. In the east, the Abor, Miri, Mishmi, and other expeditions led to a great increase in our geographical knowledge of the country north of Assam and Burma, and Trenchard of the Survey of India discovered another mountain, Namcha Barwa, of over 25,000, while Morshead and Bailey successfully explored the unknown gap in the course of the Brahmaputra.

When the war broke out, Wood of the Survey, attached to the De Filippi expedition in Central Asia, had just mapped the main source of the Yarkand river, and we had surveyors with Sir Aurel Stein on his third expedition in Turkistan.

In the war the attentions of the Survey of India were directed to Mesopotamia, Persia, Macedonia and East Africa. But since 1918 several expeditions have pushed into the Himalaya. These are, however, of recent date and there is no need for me to go over the ground covered by the three Everest expeditions or the explorations of Sir Henry Hayden, the Vissers and Montagnier.

I will now put on the screen a map showing what has been accomplished to date and what remains. The areas now surveyed are shown in red, while those that remain to be done are white. Across these white patches you will still see the explorers' route lines with new ones added. In the red areas we know the topography; rocks have been collected and flowers picked. We know something of the botany, geology, glaciology, zoology and all the other "ologies" of these regions. We want to know much more. But first and foremost we must fill the blanks of ignorance.

Beginning with the north-west, you will see the white blank of the Pamirs. It perhaps should be shown as surveyed, as the Russians have been at work here for a number of years, and their maps are improving. But this area is not yet surveyed accurately. The same applies to the T'ien Shan. Both these areas are forbidden ground to our surveyors, though sportsmen occasionally get passports to shoot there.

The next blank I will mention is the great Tarim Basin—the Taklamakan Desert and the desert beyond Lop Nor. These areas might also be called surveyed or unsurveyable, for we know that they are waterless uninhabited wastes covered with sand-dunes. Sven Hedin and Sir Aurel Stein are our authorities.

Another great blank is Tibet. Tibetans are a very shy and reserved people, and hate surveyors. Otherwise there would be no difficulty in surveying Eastern Tibet. But as you see, travellers have made a good network of journeys and one day we hope to get a triangulation series from the Eastern Himalaya to Tunhuang.

Nepal should no longer be shown as a blank. By the enlightened act of His Highness the Maharajah of Nepal, we have been permitted

to send surveyors into that country, and the work which was commenced in 1925 was successfully brought to a conclusion last year. This survey, which was entirely carried out by Indian surveyors trained by the Survey of India, has given us for the first time an accurate knowledge of the drainage and structure of 55,000 square miles of country, an area approximately equal to that of England and Wales—and extending over some of the greatest mountains of the world, in three short years.

There is still one little blank left in the neighbourhood of our own boundary. It is almost international ground, for it adjoins the surveys of Godwin Austen in 1861, of Sir Martin Conway in 1892; of Guillardot, the Frenchman, and Eckenstein, Pfannl, and Ferber in 1902-1903; of the Duke of Abruzzi, the Italian, in 1909; of Longstaff, the same year; of the Workmans—Americans—in 1912, of the Italian, De Filippi, and of Wood of the Indian Survey in 1914; and of the Vissers, from the Netherlands, in 1925.

We have there a regular geographical siege in progress. This last "veiled corner" is terribly shy, but the unknown gap grows smaller with each fresh investment. In 1926 I was fortunate in breaking into the east of that gap. We made our way some distance down the unknown Shaksgam Valley but found it blocked by a large glacier. A lake had formed behind it. We examined the snout, and found the ice hard pressed against the red marble cliffs of the Aghil Wall. We climbed the mountains east of the glacier and surveyed the northern wall of the Muztagh-Karakoram. And beyond the great Kyagar glacier we saw the unknown gap and the four wonderful giants of the range. We could have crossed the glacier. But it would have been a week's work. Our ponies could never have crossed and must have all perished. We therefore crossed the Aghil range, explored it and surveyed it. The area of this work is shown on the screen. It is into the Shaksgam Valley, below our glacier block, that the Duke of Spoleto hopes to force an entry.

Though the actual gaps in our topographical knowledge are small, our maps are by no means the finished article, especially in high altitudes, and a vast amount remains to be done in all branches of knowledge and discovery. The main object of the recently formed Himalayan Club is the extension of knowledge of the Himalaya through literature, art, science and sport. There is an immense amount of information hidden in periodicals and reports that must be collected, and there is a still greater amount to be learnt from the mountains themselves. The Himalayan Club must co-ordinate and actively encourage the further exploration of the Himalaya in all branches of science.

COMMON FAULTS IN ORDER WRITING.

By

CAPTAIN O. G. BODY, D.S.O., R.A.

Good orders are generally short orders. If they are long and involved it generally means that there is something wrong somewhere. Certain types of order, *e.g.*, orders for a night operation, or orders for a deliberate attack, must necessarily enter into more detail than such orders as a march order or orders for attack in encounter battle. Even the latter type of order, however, may become complicated in the hands of an inexperienced officer.

I. . . FAILING TO REALIZE THAT THE ORDER SHOULD INCLUDE ONLY SUCH DETAIL AS IS NECESSARY FOR ALL RECIPIENTS TO KNOW.

Such portion of the orders to the artillery or orders regarding inter-communication, supply, transport, ammunition, medical, and other services of maintenance, as is necessary for all recipients of an operation order to know will be published either in the body of the operation order by the general staff branch, or, after co-ordination by that branch, by the branch concerned as a supplement to the operation order in the form of an instruction. Detailed orders to the artillery, engineers, signals, and services which it is unnecessary for all recipients of an operation order to know, will, after co-ordination by the general staff branch, be issued separately by the branch of the staff or the officer responsible for drafting them, to those immediately concerned.

Besides the operation order, other orders and instructions will be going out. In a divisional attack order, for example, besides the operation order issued by the general staff of the division, there may be an artillery plan issued by the C. R. A. Instructions to Royal Engineers issued by the C. R. E. Instructions to Signals issued by the C. S. O. Instructions to R. A. M. C. issued by the A. D. M. S. Consider for a moment the orders to the artillery which go out from a divisional headquarters. Certain orders will be included in the execution paragraph of the divisional operation order, and certain orders will be included in the artillery plan issued by the C. R. A. What should be included in each of these orders and where should the dividing line be drawn ?

The operation order should only include such matter as is essential to ensure co-operation of the artillery with the other arms, *i.e.*, only such matter as is essential for all recipients to know. Orders which effect the artillery only will be the responsibility of the C. R. A., *e.g.*, where and when the shell are going to fall is a matter which must be stated in the operation order. The bringing up of the ammunition, dumping, etc., is an affair which concerns the artillery only and is a matter for the C. R. A. to deal with in his artillery plan.

Take again the orders to the R. A. M. C. All units will be concerned with the location of the advanced dressing stations. The actual field ambulance units which open the advanced dressing stations will be detailed by the A. D. M. S. and need not necessarily be mentioned in the operation order. Similarly units will not normally be concerned with the location of the main dressing stations.

The removal of wounded from the A. D. S. to the M. D. S. is the responsibility of the R. A. M. C. If the actual field ambulance units which are to open the A. D. S., and the position of the M. D. S., etc., are all to go into the operation order, the orders become long and involved. Remember the C. R. A., C. R. E., C. S. O., A. D. M. S., etc., are commanders, and will be issuing orders of their own.

In drafting orders to formations, officers will understand better what to include, if they look upon an operation order as a "Co-operation" order. If more than one addressee is affected the matter must be included. As a rule, if only one addressee is affected, it is a matter which that addressee can arrange for himself, or should be the subject of a special message or order to that addressee. If in doubt as to whether a matter should go into an order or not, ask yourself the question "Is more than one addressee affected." If the answer is "yes", put it in the order. If the answer is "no", leave it out.

II.—COMMAND NOT PROPERLY ORGANIZED AND FUNCTIONS OF VARIOUS PROTECTIVE BODIES NOT UNDERSTOOD.

If the grouping or organization of the forces under command is complicated or unsuitable to the operation in hand, bad orders necessarily follow. This applies in particular to protective schemes, because in this type of scheme the candidate often has to detail the actual forces employed on various duties.

In schemes involving an approach march an exact knowledge of the employment of special mission cavalry, protective screen, advanced guard mounted troops, van guard, main guard, etc., is required : yet the results in examinations show that many candidates have not got their ideas clear regarding the functions of these various bodies. The most hardy annual of all in the way of an examination error is, failure to realise that troops which have been detailed to seize and hold cannot protect, *i.e.*, a complete misunderstanding between a duty of special mission and a duty of protection. Good orders based on a misconception of this kind are impossible to write.

In rear guard schemes, the rear guard commander frequently fails to detail a definite rear party and commander—and difficulties at once ensue.

In flank guard schemes the same faults are often evident. It is impossible to write a good flank guard order unless F. S. R., Vol. II, Section 50 “Composition and action of a flank guard” is fully understood.

III.—ORDERS BASED ON AN INFANTRY PLAN ONLY.

A very common fault in attack, defence and outpost schemes.

“The object of an operation order is to bring about a course of action in accordance with the intention of the commander and with full co-operation between all arms and units.”

The frequency of the fault arises from the fact that a very large majority of officers presenting themselves for examinations are drawn from the infantry arm. This accounts for a natural tendency to omit orders to other arms altogether or to treat them too lightly. The infantry is certainly the most important arm, but separate and independent action by this arm cannot defeat the enemy.

A “One arm scheme” is an examination fault which is heavily penalized by the examiners. Candidates as a general rule, will do well to give greater prominence to the orders to artillery, tanks, machine guns, cavalry, R. E., R. A. F., etc. A good sound plan which ensures co-operation between the arms is what is required. The examiner wants to see some definite relation between the artillery plan and the infantry plan. In attack schemes for example, one often sees good sound orders to the infantry, and the artillery

orders dismissed by "The artillery will support the attack." The latter order to the artillery will seldom, if ever, suffice.

It is the sign of a weak candidate. In attack orders to the artillery, the operation order must ensure that the artillery is used offensively to prepare the way for the infantry either by some form of modified barrage or by concentrations on selected targets.

Similarly, cavalry must be dovetailed into the general scheme of attack, and their action must have some definite bearing on the completion of the commander's intention. Orders to them cannot be dismissed by saying. "The cavalry will support the right flank of the attack." They must be given more definite tasks.

IV.—INTENTION NOT CLEAR.

It is of course obvious that if a commander has not a clear intention in his mind, it is impossible for him to write a convincing order. Again, the order will fail to carry conviction, if the commander has failed to express his intention clearly and concisely in his intention paragraph. The main fault in stating intentions, however, is to make them too general, and to state an intention covering a period of time in excess of that covered in the method paragraph. Remember the caution "It is seldom necessary or advisable to look far ahead in stating intentions." In an instruction an intention covering several days' operations may be stated, but not so in an order. The following is a good example of an instance where great care is necessary in framing the intention paragraph.

A	X	Y	B
FORCE			FORCE
One Bde. Gp.		Z	
One Regt. Cav.			
One A. C. Coy.			

The force at A is effecting an approach march against a force located at B. There is a difficult and important defile at X, also a good position covering the defile at Y———Z. The passage of the defile is an operation in itself and the force commander's first anxiety.

The following intention was given in the Force Operation Order for the first day.

"The Force Commander intends to seize the defile at X in order to allow him liberty of action to debouch therefrom.

This looks innocent enough at first sight, but does it really express the Force Commander's intention ?

This intention is included in a Force order, so it would be understood that the Force was to be used for securing the defile. Again; is seizing the defile the Force Commander's intention ? No. The Force Commander's intention is, to pass through the defile and fight on the other side of it. The mounted troops should therefore gain contact and hold the enemy away from the exit of the defile so that the remainder can pass through. "Seizing" the defile does not in any way express the Force Commander's intention. The intention for the first day's operation would have been better expressed as follows. "The Force Mounted Troops will hold the enemy east of the line Y——Z so that the North Infantry Brigade and attached troops can debouch from the defile at X."

A very different story, and an intention which does not in any way hamper the initiative of the mounted troops. As long as the line Y——Z is secure, they can exploit any advantage they gain, and make contact as far east as possible—a most important point, as the general intention of the Force Commander is a vigorous offensive.

The above example has been quoted in order to show the great care which must be taken in framing the intention paragraph.

V.—ATTEMPTING TO EMBRACE TWO OPERATIONS IN ONE ORDER.

For each operation a distinct and separate order must be written. A formation may well be carrying out two distinct and separate operations, and because they cover the same period of time there is a tendency to write one order to cover them.

When forces are definitely detached from the parent formation, orders to detachments are frequently mixed in with the orders to the parent formation, and confusion is bound to arise. One operation, one order, is the rule which should seldom be departed from.

To take examples ;

A withdrawal in the face of the enemy. The instruction to the rear guard commander, now a detachment commander, must not be included in the general order for the withdrawal.

A relief overnight followed by an attack at dawn. The relief and the attack are two separate operations, and two separate orders should be written.

There is one general exception to this rule—in night operations. Night marches, night advances, and night attacks are classified in F. S. R. as distinct and separate operations, and yet one operation order is usually written to cover any combination of these operations which it may be decided to carry out during the night. If you are writing an order for a night advance and a night attack, make quite sure that your intention paragraph states clearly that you intend a night advance and night attack: and in your method paragraph complete the orders for the night advance before you start writing the order for the night attack. The order must show clearly that you are attempting to embrace two operations in one order.

VI.—FAILING TO MAKE USE OF INSTRUCTION AS WELL AS ORDERS.

Unless the conditions of time and place are definite, operation orders cannot be issued. If a commander wishes to make his intention clear to subordinate commanders beyond the period for which definite orders can be issued, then an instruction as well as an order must be written.

Officers responsible for controlling operations must decide therefore, whether the situation is best dealt with by—

1. Issuing an operation instruction only.
2. Issuing an operation instruction as well as an order.
3. Issuing an operation order only.

As a general rule officers are inclined to issue an operation order to cover every eventuality: and with larger formations, such as a brigade group or a division, the tendency is to get out an operation order overnight to cover the whole of the next twenty-four hours, in the hope that they will not have to issue another operation order during that period. Orders are often written to cover a period during which the reactions of the enemy cannot be foreseen or prejudged. Divisional and brigade staffs may well want to let subordinate formations know the intentions of their commander for a period of twenty-four hours ahead, but they need not necessarily issue an operation order to cover this period. Instructions as well as orders must be freely used. Divisional and brigade staffs would often do better to issue an order overnight to cover the immediate situation which may develop the next morning, and an instruction to cover a longer period, so that subordinates can act intelligently if orders fail to arrive, or to enable them to anticipate orders.

Operation orders are sometimes issued with instructions appended to delay putting them into execution until definite orders to act on them are received, *e.g.*, operation orders for an attack may be issued, and appended to the operation order, are instructions to the effect that "these orders will not be communicated lower than battalion commanders until definite orders are received to put them into execution." Such instructions issued with an operation order are very seldom warranted, and they generally indicate that orders have been written on a prejudged or predicted situation. Under such conditions the operation instruction is the best means of controlling the situation.

To issue a full operation order and state that "Zero hour will be communicated later" is another matter. Delay in communicating the hour of attack is often justified.

An operation instruction may often be sent as a form of warning order, *e.g.*, In a rearguard action, instructions in the event of withdrawal may be sent out, so that subordinates may anticipate orders, or be prepared to withdraw on a very brief message.

Operation instructions may be issued for two purposes,

1. Instructions used to indicate the general idea in the mind of the commander, when the situation is not sufficiently clear for him to give definite orders.
2. Instructions issued in conjunction with a certain operation order and amplifying it as regards details.

The Method paragraph of an operation order must only contain matter for definite action, and should never develop into "chat" about situations which may occur. It should not contain any suggestion as to the handling of troops, or exhortations that they should act with extreme vigour or with caution or any matter of that kind. If this kind of "chat" is necessary (and it may be with untrained troops, or for a special operation such as a night operation) it should be contained in an operation instruction written in amplification of the operation order.

VII.—FAILURE TO UNDERSTAND THE PRINCIPLE ON WHICH OBJECTIVES AND INTERMEDIATE OBJECTIVES ARE ALLOTTED.

F. S. R., Vol. I., Section 68, paras. 1 and 2 are seldom grasped by candidates and as a result constant confusion arises in orders.

“In encounter attack, owing to the lack of accurate information, it will generally only be possible and advisable for the commander of a formation to allot general and distant objectives leaving to the subordinate commanders the allotment of the intermediate objectives.”

“In the deliberate attack, when fuller information as to the enemy’s defences are available, co-ordination by higher commanders may be best effected by allotting intermediate objectives.”

Every commander must give a definite objective to the next lowest formation, unit, or sub-unit, which he commands, but under conditions of deliberate attack he may have to give intermediate objectives with the object of co-ordinating the speed of the attacking formations and ensuring simplification and co-ordination of the artillery support. In the deliberate attack, fresh troops are usually passed through on a pre-arranged time-table; in encounter battle they are passed through when the attack appears to be losing its momentum.

The allotment of intermediate objectives must not be confused with the allotment of 1st and 2nd objectives, etc. You cannot allot 1st and 2nd objectives to the same formation or unit. 1st and 2nd objectives are allotted to different formations or units. Objectives and intermediate objectives are allotted to the same formation or unit. For example. An infantry brigade commander will allot objectives to his battalions. He may decide to attack with two battalions forward and two in reserve. If it is an encounter battle he may direct his leading battalions on to the objective he has been ordered to take, and put in his reserves as the occasion demands. In deliberate attack, however, he may detail his leading battalions to capture the line a—b and his reserve battalions to pass through and capture the line c—d, *i. e.*, the lines a—b and c—d become the 1st and 2nd objectives respectively for his brigade. Each line will be taken by a different unit. He may, however, wish to go further than this and co-ordinate the rate of advance of the two leading battalions and ensure that the leading companies are “leap-frogged” by the reserve companies on a particular line. He will then order an intermediate objective for the leading battalions.

We will consider the extreme case of a division attacking under difficult conditions of position warfare in which the movements of

the troops have to be co-ordinated accurately with a timed artillery programme. It is obvious that under these conditions you cannot have units leap-frogging and reorganizing entirely at times arranged by their unit commanders. The divisional commander may order,—

1st Objective.—The line A. B. C. to be captured by the 1st Infantry Brigade.

2nd Objective.—The line D. E. F. to be captured by the 2nd Infantry Brigade.

The divisional order may then go on to detail intermediate objectives for the 1st Infantry Brigade as follows.

“Intermediate objectives for the 1st Infantry Brigade are allotted as follows” :—

“Line H—I—J and K—L—M.”

i. e., the 1st Infantry Brigade will take its objective in three bounds and will use the intermediate objectives as lines on which to reorganize the attack and pass through fresh troops. The Brigade Commander will write his orders accordingly and use one of the intermediate objectives of the divisional order as the objective of his leading battalion or battalions. This may be represented diagrammatically as follows :—

ALLOTMENT OF OBJECTIVES IN DIVISIONAL ORDERS.

D—————E—————F

2nd objective of the division. To be captured by the 2nd Infantry Brigade. Probably no intermediate objectives allotted to this brigade as attack would now be becoming more open.

A—————B—————C

1st objective of the division. To be captured by the 1st Infantry Brigade.

K—————L—————M

Intermediate objective of the 1st Infantry Brigade.

H—————I—————J

Intermediate objective of the 1st Infantry Brigade.

—————STARTING LINE—————

ALLOTMENT OF OBJECTIVES IN BRIGADE ORDER, WRITTEN ON ABOVE DIVISIONAL ORDER.

A—————B—————C

2nd objective of 1st Infantry Brigade. To be captured by C and D Battalions.

K—————L—————M
 1st objective of 1st Infantry Brigade. To be captured by A and B Battalions.

H—————I—————J
 Intermediate objective of A and B battalions.

—————STARTING LINE—————

ALLOTMENT OF OBJECTIVES IN BATTALION ORDER, WRITTEN ON
 ABOVE BRIGADE ORDER.

K—————L—————M
 2nd objective of the battalion. To be captured by C and D companies.

H—————I—————J
 1st objective of the battalion. To be captured by A and B companies.

—————STARTING LINE—————

Here we have an extreme case in which the divisional order has influenced the movement of the leading companies of the attacking battalions of one of the brigades.

The intermediate objective applies to the case in which the commander of a higher formation steps in and co-ordinates movements which normally speaking are the duty of his subordinate commanders to arrange.

VIII.—WEAK ORDERS TO THE ARTILLERY.

In operation orders dealing with attack the co-ordinated action of the two main arms, *i.e.*, the artillery and the infantry, must be assured. Orders often show weakness in the fact that the type of artillery support ordered is entirely unsuited to the type of infantry attack which is being staged.

In an attack order there are three general methods of artillery support which have to be considered.

1. To support by observed fire.
2. To support by concentrations on selected targets and localities (timed or lifting by observation).
3. To support by barrage fire.

During an attack a combination of all three methods may be used.

Observed fire is applicable to conditions of open warfare, affairs of van guards, advanced guards, etc., and to the later stages of an attack when things have gone too far for accurate timings.

Support by concentrations is the normal method of supporting an attack in encounter battle, when sufficient guns are not available to cover the whole front of attack. Fire in this instance must be concentrated.

Barrage fire is applicable to position warfare, and perhaps in very modified form to the opening stages of an attack in encounter battle.

From an artillery point of view there are two general methods by which an infantry attack proceeds—

1. The deliberate attack in which fresh infantry are passed through on a pre-arranged timed programme.
2. The encounter battle in which fresh troops are passed through when the attack appears to be losing its momentum.

The method of attack by which the infantry proceeds will govern the method of support which the artillery apply. If the infantry is proceeding by the encounter warfare method of putting in fresh troops, when the attack appears to be losing its momentum, an artillery barrage would be entirely unsuitable. The open warfare method, with infantry formations, units, and sub-units put in as the occasion demands, cannot be supported by barrage fire, except perhaps in the very modified form of a couple of lifts at the outset to get the infantry away from the starting line. Unless the infantry attack is moving to a timed programme, it stands to reason that the artillery fire cannot move to a timed programme. Open warfare attacks must be supported by concentrations on selected targets or by observed fire. The concentrations, however, may be timed, and they should act as pivots of manœuvre for the advancing infantry, but it must always be understood that the artillery will modify the timings by observations if such is advisable and can be arranged.

The main attack in open warfare may start by a modified barrage, proceed to timed concentrations, and finish with observed shooting. When a point in the attack is reached where infantry timings cannot be fairly accurately judged, then the artillery timed programme must also cease.

The artillery support of tank attacks also requires consideration. Barrage fire will not be suitable. Concentrations on selected targets will usually be found the best method. Tanks can pass between the concentrations, and deal with those posts which have escaped the artillery preparation.

In the defence it is usual to state in orders the locality in which the guns are situated. In the attack this is seldom stated, but in the defence things are different. The gun position area is an essential part of the general organization of the defensive position and should be known to all arms.

It is also advisable to give some indication of the main artillery observation zone, as it is important to allow all commanders to understand the general "lay-out" of the defences. The gunners will also want to know the killing area, *i.e.*, the line in front of which it is intended to stop the enemy, in order that they can sight their observation posts correctly.

In a defence order, therefore, the artillery sub-paragraph should clearly define the killing line, the line of observation, and the gun line or area.

IX.—THE OVER-ELABORATION OF ORDERS.

The indoor academic solution of tactical schemes leads to many bad habits in order writing, and the over-elaboration of orders is one of them. There is a tendency to insert many things in operation orders which automatically arrange themselves. Orders must be practical, and above all, must arrive in time for the recipient to make his arrangements for their execution. The fault of over-elaboration often arises from the anxiety of candidates to show the examiners that they have considered every eventuality, and have given a definite job of work to everybody, but this anxiety must not be allowed to draw the candidate into a confusion of details.

At the same time it must be admitted that in the examination room a certain amount of unreality exists, and candidates must acquire the habit of putting their best goods in the shop window. They must, however, cultivate the art of not doing this too obviously, and this art should never descend to entering into trivialities.

It must be remembered that all formations will have standing orders, and many details which would normally be included in them

often find their way into operation orders. This is particularly noticeable in mountain warfare schemes.

The following are examples to illustrate the fault of over-elaboration.

"The Brigade Machine Gun Officer will co-ordinate the fire of the machine guns allotted for the defence of the outpost position."

Of course he will. That is his normal duty.

"The D. A. P. M. will arrange for the traffic control."

The D. A. P. M. should be fully aware of this responsibility.

Orders for inter-unit liaison, such as battalions making contact at various points during the attack, are seldom warranted in operation orders, especially in mobile warfare. Units should make and keep contact with units on their flanks. That is part of their normal duties.

Details as to when or how often reports are to be submitted during an encounter operation should seldom be included. The importance of sending back information as soon as acquired should be fully appreciated, and should require no emphasis in orders. If runners are to be constantly sent back with negative information your inter-communication resources will soon be used up.

Officers of specialist arms are very inclined to over-elaborate the details of the order which apply to their particular arm. Signal officers for example, are very apt to overdo the inter-communication paragraph and include in it a lot of special matter which would normally be included in a special signals instruction to signal units.

THE EFFECT OF THE MACHINE GUN COMPANY ON THE TACTICAL HANDLING OF A BATTALION.

BY

COL. A. H. C. KEARSEY, D.S.O., O.B.E.

Our object in battle is to bring superior numbers to bear at a decisive point to strike the enemy by a judicious combination of fire and movement. The crux, then, of the present situation, will be to obtain that desired superiority of bayonet strength for the assault of a position.

The total strength of three rifle companies will be 18 officers and 459 other ranks. From these numbers 48 must be deducted for handling and firing Lewis guns and 51 for the three headquarters of the three companies. In addition, deductions must be made for casualties during the advance and for sickness and previous casualties.

In three companies, then, we may not expect to average more than 300 men for the actual assault and of this number, some reserve must be kept in hand for exploiting success and for dealing with unforeseen eventualities. The front normally allotted to a battalion in defence and attack is about 1,000 yards for approximately 200 bayonets under present conditions.

These arguments equally apply to holding positions and for protective duties. To counterbalance, then, this reduction in rifle and bayonet strength the Machine Gun Company will have to be boldly used. The machine gun though not an arm by itself is, however, as a weapon, a powerful auxiliary to infantry and is well adapted for close co-operation.

Its co-operation will have to be closer than formerly but it must be limited by the following factors, *viz.*—

- (a) that it is less mobile than infantry,
- (b) that it must have transport to carry it for any distance,
- (c) that it takes up to ten minutes to come into and out of action in a carefully chosen and concealed position,
- (d) that it weighs with the tripod $84\frac{1}{2}$ lbs. and cannot be man-handled for long distances or keep up with infantry in a long advance under these conditions,

- (e) that it can only fight when it has halted and has come into action,
- (f) that it is most suited for dealing with an enemy in the open ; that it obtains and corrects its range by the actual observation of the strike of the bullet on the ground or by its effect on a target.

On the other hand, three men with each gun can develop fire power equal to sixteen men firing rapidly, so that, we shall be able to save casualties during the advance and enable the advancing troops to maintain their mobility by obtaining superiority of fire, if machine guns are boldly used to gain this fire supremacy. This must be the basis of the handling of machine guns in a battalion.

They can be the most valuable asset if they gain this fire supremacy. They will, then, add very considerably to the efficiency of a battalion in replacing a rifle company 153 strong with 8 Lewis guns. By having four machine gun sections it will be possible to carry out adequately the distribution of machine guns in depth in every operation as Forward, Supporting and Reserve guns.

With only eight guns in a battalion this has been difficult as a section is the smallest unit that can be adequately administered and commanded. There are three limbered G. S. wagons to each section for the carriage of guns, ammunition and spare parts. These three vehicles cannot be conveniently split up if the sections are subdivided.

Now in attack and defence it will be possible to have,

- (a) a section of four machine guns as forward guns to enable the leading infantry to advance and assault a position and to hold it during consolidation ;
- (b) a section of four guns as supporting guns for flank protection, to support and cover gaps in the forward units ;
- (c) two sections as a reserve of fire power in the hands of the commander.

Sections are self-contained units under an officer and now they act as a unit for self-protection and mutual support with the other sections.

In considering the tactical uses of the machine gun company, it has been found that the best ranges for a machine gun are from 500 to 1,500 yards. This fact helps in the distribution of the guns in

action and enables us to decide on placing sections in echelon approximately 500 yards apart. The guns should be distributed in depth and sections should be able to support one another as well as the infantry with which they are working.

In defence of a position the Machine Gun Company must be disposed in depth.

As regards the selection of the gun positions, we learn in our official Training Manuals, that, in order to fight on the defensive, it is essential to organize the fire plan so as to use artillery, machine gun and infantry fire in co-operation to the best advantage. Artillery fire plans, the siting of infantry defences, and erection of wire obstacles must be co-ordinated to force the enemy into the arcs of the machine gun fire.

These machine guns should be sited for direct fire in sections or sub-sections in positions from which they can bring fire to bear for at least 500 yards to their front. The siting of the defences must be so co-ordinated that with the machine gun fire plan a belt of fire can be formed in front of the position, with the intervening ground between positions covered by flanking fire. Machine guns should be sited behind ground affording concealment from the front and should be protected by the dispositions of the other troops.

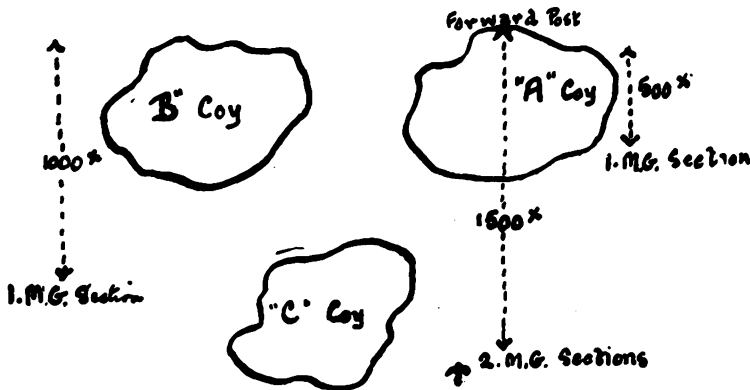
Towards the end of the War, when there was much artillery in action, Vickers guns could not be placed in the forward position. They could not exist in action when directly opposed by well-handled artillery.

They could only be kept in the forward positions as silent guns to produce concentrated fire at close range in the event of a sudden attack of the enemy. In this case only a very small proportion should be with the forward troops.

It must be remembered that machine guns take at least two minutes to move out of action and then their transport is less mobile than infantry, so that if they are not kept about 500 yards from the

forward infantry they may be involved in difficulties which will call for the assistance of infantry if they are not to be lost. Thus :—

Battalion in defensive position in mobile warfare.

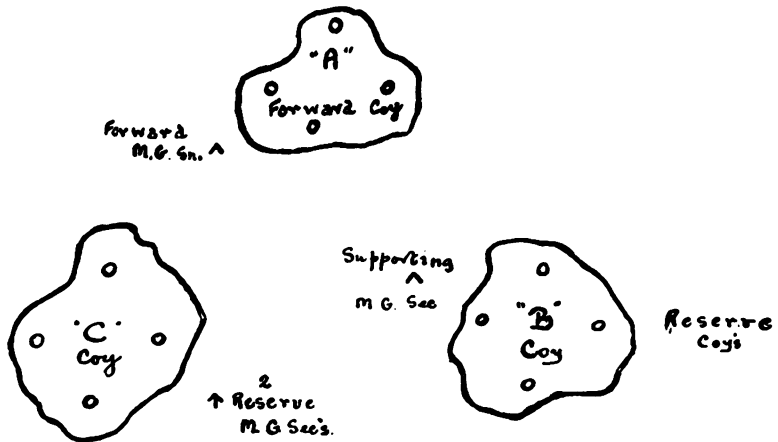


In defence, machine gunners should be careful not to disclose their guns in action. They should not open fire too early as that discloses prematurely the fire plan of the defence. They should cover the barrels which become shiny and should arrange for flash absorbers. They should site for direct fire and should take measures to ensure that indirect fire can be carried out on their chief lines for direct fire. They should arrange to have a few grenades with them to deal with enemy in dead ground close to their guns.

Arrangements should be made that they retain their mobility by having their transport, namely, 10 animals and 3 limbered G. S. wagons per section in the vicinity of their reserve guns. This will be necessary to deal quickly with a change of position required to support our counter-attacks or the enemy's attacks from an unexpected direction.

In the *attack* the machine guns must also be disposed in depth. The attack to-day is a methodical progression from one objective to an other.

For the capture of each of these objectives the machine guns must be available. Thus :—



o=1 platoon.

M. G. sections are approximately 500 yards in depth apart.

In this way machine guns will be disposed to cover the advance of attacking troops. They will successively advance by bounds so that they are always in the three Echelons as

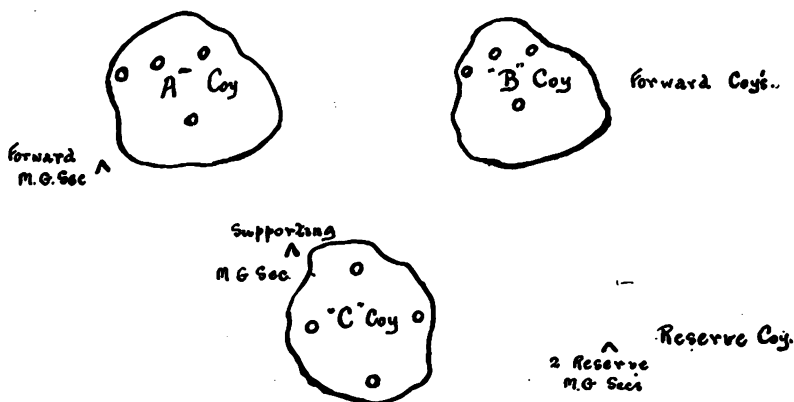
Forward,

Supporting,

Reserve guns.

They will be able to apply concentrated fire on localities checking the advance, they can protect the flanks and cover gaps between units, and deal with counter-attacks and help to hold successive objectives, and they are available to provide a reserve of fire power.

As the attack progresses they may be disposed thus :—



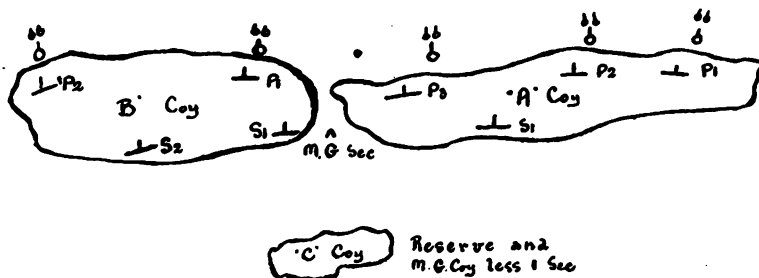
o=1 platoon.

On the completion of an attack complete sections will be available to cover with fire those at work on the consolidation of the captured position.

On outposts machine guns will be most usefully employed in sweeping approaches to the outpost position from the vicinity of the supports. The same principle being applied to the numbers used as for the infantry, namely, only to use $\frac{1}{4}$ in the forward positions.

As, now, normally two rifle companies will be forming the piquets and supports with one rifle company in reserve, the machine gun section on outpost duty will be of increasing importance. The remainder of the machine company will be required to arrange night lines for concentration of fire and to reconnoitre the ground in their front for positions from which to support the Forward Rifle Companies and Forward Machine Gun Section.

Battalion on Outpost.



\perp P=Piquets.

\perp S=Supports.

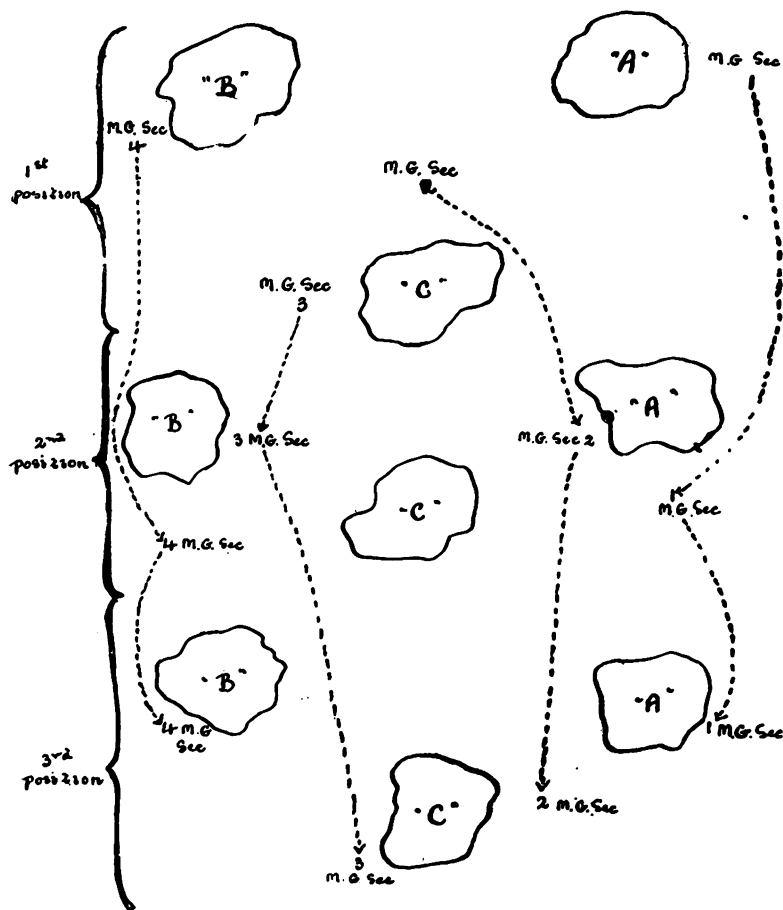
\circ =Sentry group.

\circ =Sentry.

In rear guard action the machine guns should be boldly disposed and handled. In order to replace the deficiency in bayonet power it will be essential to keep the enemy at a distance from the main rear guard position.

As ammunition supply is not the difficulty it is in an attack the machine gun should be sited for a long field of fire in order to open fire early and force the enemy to deploy, and, thereby, delay him to give the two rearward rifle companies time to make adequate arrangements for retreat.

They should be sited with a view to withdrawal near tracks and reconnaissance must be carried out so that they withdraw to definite and known positions, so that some guns are always in action while others are moving, and that they move successively from one position to another. Thus:—



In the advanced guard, in order to add to its offensive power a section may be allotted to the van guard company and it will march with the main body of the van guard. The remainder of the machine gun company can be disposed normally on the line of march behind the leading company of the main guard. They will thus gain protection and will be sufficiently far forward to support the van guard operations. Owing to the increased offensive power thus given to the advanced guard its commander will be able to carry out his role adequately of dealing vigorously with the first enemy encountered and will thus prevent the march of the main body from being delayed.

It must be noted, however, that the column on the line of march will be longer than when there were 4 rifle companies as each of the four sections will take up 65 yards of road space, that is, 260 yards for the company in place of 90 yards for a rifle company.

The increased fire power now in a battalion will be of considerable importance in adding to its security, mobility and offensive power.

Further improvements for the efficiency and security of a battalion will be to mechanize the machine gun company, in order to add to its mobility and striking power, and to add to it a section of half inch mechanically propelled anti-tank machine guns, capable of moving through 360 degrees in light bullet-proof armoured cross-country vehicles, each with a crew of two men, supported by a section of mobile self-propelled 18-pounder Birch guns with an all-round traverse.

VOCATIONAL TRAINING IN THE ARMY AT HOME.

By

LIEUT. W. G. I. M. ETHERINGTON, A.E.C.

PART I.

During the last twenty years several attempts have been made to introduce into the Army various forms of technical or vocational instruction. So long ago as 1910 for example, technical classes were formed in Malta. These were well conceived, and the early demand was great, but the scheme soon petered out for the inevitable lack of funds. It was not until after the war that opportunity came for this form of training to be undertaken on anything approaching a practical basis. During the demobilisation period, when large numbers of men had of necessity to be concentrated for lengthy periods under irksome conditions, the idea was conceived of forming trade classes, the trades selected being those for which machinery tools and material were most readily available, and the object primarily to occupy the minds of the men employed pending their demobilisation. When, however, demobilisation had become more or less an accomplished fact, there remained a residue of instructors, as well as of tools and material, and to this residue, thanks to the foresight of those responsible, the present Army Vocational Training Centres owe their being.

It is the aim of vocational training to teach time-expired men trades which will enable them to obtain and keep well paid and congenial employment in the open market. The need for such is evident.

The men come from three classes, irrespective of rank, *viz.* :—

- (a) those with 21 years' service and over,
- (b) those with 12 years' service, and
- (c) those going to the Army Reserve.

Firstly with regard to (a). The 21 years man, who is usually over 40, has assets which are second to none, *e.g.*, punctuality, discipline, civility and sobriety. He has also a fetish, and his fetish is that he, on his return to "civvy" life, requires a "position of trust". No matter what his qualifications may be for other and more lucrative employment, he has a most decided penchant for a "position of trust." And, after all, that is one job for which he is eminently well suited. It is in many respects a job similar in effect to that which he is leaving—regular place of employment, regular hours of work, and regular pay.

He is unsuited to the rough hurly-burly of the modern scramble for existence, he is growing old, and the work which younger men can perform with dexterity and ease, he finds difficult and irksome. He has a pension, and the regular wage attached to this form of employment satisfies his needs, and every effort is and should be made to secure for him work of this nature.

Now (b). The 12 years man, who is 30 years of age and upwards, is more adaptable. He is frequently the product of an orphanage, or an ex-boy. He has, in all probability never had to fend for himself, and knows scarcely anything of the world outside the Army. He therefore deserves special consideration when selections are being made. He is given every possible assistance at the Centres and many excellent tradesmen are produced from this category.

Finally (c). Those going to the Reserve, who may be as young as 21, have the advantage of youth and can be moulded more easily than the older men. On the other hand they often display an over-confidence in themselves and their ability which is detrimental to them.

Generally those students who attend the Centres are found to have had little or no experience in any of the trades prior to enlistment.

So much for the material, let us now turn our attention to the means at our disposal for dealing with the work of training this material.

There are at present three Centres in the United Kingdom,—Hounslow, Chisledon and Aldershot. Each Centre will be briefly described in turn.

Hounslow.—The Army Vocational Training Centre at Hounslow is situated on the historic Heath of the name, and is about 11 miles from Charing Cross. It is a permanent Hutments Camp designed originally to house a battalion of infantry and has accommodation for approximately 600 students. The present approved establishment of students is 375 and that of instructors variable, the policy followed being that no instructor deals with more than 15 students.

Students are attached for the period of the course and are borne on the Centre Pay List. They are returned to their units for discharge purposes as a general rule, although should this interfere in any way with the taking up of employment, special authority has been given for the discharge to be carried out at the Centre.

The general outline of administration is that the Centre is commanded by a Lieutenant-Colonel, Extra Regimentally Employed List, who is responsible for interior economy and technical training, with an adjutant seconded from his regiment for a period of three years, who is responsible for purely military administration pay, etc., and who also acts as quartermaster.

For training purposes the Centre is divided into two groups—Building and Engineering, each of which is controlled by a civilian Chief Instructor.

The Building Group comprises the following classes—

- Building Construction.
- Painting and Decorating.
- Plumbing.
- Bricklaying.
- Plastering.
- Handyman.
- Upholstery.
- French Polishing.

The Engineering Group deals with—

- Motor Repair Work.
- Fitting and Turning.
- Moulder's Work.
- Smithing.
- Acetylene Welding
- Electric Wiring.
- Coach painting and Spraying.

In addition to the foregoing, there are classes in—

- Bootrepair work.
- Private Service.

Arrangements are made to deal with men requiring positions of trust, knowledge of London, (Scotland Yard test for taxi-drivers), as well as for men desirous of taking up technical courses at any of the London Institutes. These men are either given leave for the whole period of the course, or are accommodated at Hounslow whilst attending the course.

The Centre has large well equipped workshops which, as funds become available, are gradually being extended. Already a large spray painting shop has been built and an up to date plant installed capable of dealing with paint and cellulose spraying on the latest lines.

Acetylene welding, an expensive subject to teach, is undertaken to the extent that ten sets of apparatus may be, and usually are, in use simultaneously.

A large motor repair shop has been erected and equipped with all the modern appliances necessary for adequate instruction in motor repair work.

These buildings have been erected and plant, electric light, etc., installed by student labour out of funds accruing from production within the Centre.

Each class is in the charge of a civilian instructor who is a competent tradesman, and the system of training is such that so far as is practicable training and production are combined. Therefore the civilian instructor combines the function of teacher with that of foreman, and the student, as soon as he learns the use of the tools incidental to his trade, commences in some degree to perform a task which has a definite productive relation to the trade he has elected to follow. This holds his interest and goes a long way towards establishing that confidence which is so necessary to success.

Chisledon.—The Chisledon Centre is situated at Chisledon about 3 miles from Swindon. It is the old School of Military Administration to which has been added farmlands and buildings which go to make up a total area of over 1,000 acres.

The school buildings and barrack rooms are of semi-permanent type, splendidly laid out, with tarmac roads flanked with avenues of trees. Both roads and buildings are electrically lighted from the Centre's own power station.

The administrative staff, as at Hounslow, consists of a commandant and an adjutant and quartermaster.

At Chisledon the principle activity is farming, although in addition the following trades are taught—

Bricklaying.

Plastering.

Carpentry.

Painting and Decorating.

Plumbing.

Estate Handyman.

General Blacksmith.

Groundsman.

Training is organized in sections so designed as to ensure that students applying for assisted passages to the Dominions may be in a position to answer satisfactorily those questions demanded of them—"Can you manage heavy horses?" "Can you plough?" "Can you milk?" In addition to these bare minima, men for Overseas Settlement receive instruction in the following work—

(a) *Management of horses.*

Correct feeding and watering.

Grooming and bedding.

Correct adjustment of harness.

Management of single horses, pairs, triples, fours and eights.

(b) *Management of Farm Implements.*

Ploughs, single and double riding; harrows; cultivators; discs; horse hoes; force feed seed drills; root drills; reapers; tedders; rakes; binder stacking, thatching, threshing and grinding.

(c) *Dairy Work.*

Milking, cooling, separating and sterilizing.

Breeding.—Calf rearing, dehorning, castration and registration.

All men learn to milk, cool, separate and sterilize. Daily recording is maintained and charts are kept. There are at present 120 milkings per day by students. Breeding is organised so that experience in calving every week is assured.

(d) *Pig Farming.*

Open air—in woods, on waste land, on forage crops.

In-door—the Canadian Barn system is taught, using balanced rations varied according to market prices.

About 50 breeding sows are kept and farrowing proceeds all the year round. Correct attention at farrowing, rearing, castration and weaning are taught. Use of humane killer and pole axe, scalding, cutting up, manufacture of by-products (sausages, brawn, lard, etc.) bacon and ham curing.

Students prepare pigs for Shows and also attend local auction marts to gain a knowledge of buying and selling.

(e) *Poultry farming.*

Trap nesting, natural and artificial hatching and rearing by incubators and foster mothers. Rearing of ducks, geese and turkeys.

Killing, plucking and preparation for market.

Construction of coops, nest boxes, brooders and portable houses.

(f) Gardening.

Every man works a plot 1-10th of an acre for cropping in evenings and spare time. Much useful knowledge is assimilated by contact with the large productive gardens which are worked by students, other than those for Overseas, who are specializing in this work.

Budding, grafting and pruning of fruit trees forms a part of this course.

(g) Carpentry.

Rough carpentry is taught and consists largely of work on the lines of that described in a book "Makeshifts" published by the New Settlers League of Australia.

(h) Boot Repairing.

Classes are held two evenings a week, and the head of each family carries out all boot repairs for himself and his family during the six months at the Centre. Most men take out a supply of tools which they have bought gradually during their period of training.

At this Centre are whole families—the soldier, his wife and family—who in six months receive a course of training which makes it possible for them to proceed to the land of their adoption, Australia or Canada as the case may be, capable so far as the man is concerned, of handling teams of horses and using the agricultural implements peculiar to the country with as much dexterity as the old timer. He can fence and ditch, cold shoe, knows a little of smithing, can handle an axe, an adze and a hammer, and has learned to work all the hours that God sends. His wife can milk, separate, make butter and knows something of poultry and the ills to which they are heir. His children too, be they old enough. All this is possible for the reason that the instruction is in the hands of skilled agriculturalists, each a specialist in his branch. Two have been appointed recently who have had years of experience Overseas, the one in Australia, the other in Canada, each knowing intimately the districts to which the Groups from this Centre are allocated.

Aldershot.—This Centre is situated at Thornhill, Aldershot, and is conducted on somewhat different lines to either Hounslow or Chisle-don. Here students are not accommodated, but are drawn from units stationed in Aldershot. In special cases men from out-lying stations may attend and arrangements are then made for their attachment to an Aldershot Unit. It may be said that Aldershot is a sort of day school as compared with the boarding school status of Hounslow and Chisle-don.

The Commandant is also Chief Instructor and stores and material are controlled by a Quartermaster who is permanently appointed.

The following trades are catered for—

Bricklaying.
Plastering
Carpentry.
Painting and Decorating.
Plumbing.
Concrete Work.
Builder's Draughtsman.
Builder's Clerk.

This Centre is unique in that owing to its situation a considerable amount of building and work incidental to the building trades can be carried out without giving offence to the Building Trades Unions. Contracts are entered into with Military Departments for the erection of garages, sports pavilions, etc., and for the addition to and alteration of existing buildings, so that so far as the building trades are concerned students at Aldershot stand to get a more comprehensive and practical training than those at either of the other Centres.

PART II.

Vocational training ensures that a large proportion (80% is claimed) of its trainees go into civil life as wage earners, with never a need for the "dole". Fit and contented reservists are a national necessity and vocational training makes your reservist the fit and dependable soldier the emergency for which he may be required, demands. Vocational training attracts to the Colours a class of recruit which is above the average of intelligence. It removes the fear of the "blind-alley" and consequently men of higher intelligence become available to meet the ever-increasing demands of mechanization and modern warfare.

The figure of 80 % quoted above is obtained through the medium of an employment bureau. There is no central bureau co-ordinating the work of the three Centres, each has its own method, but at Hounslow every effort is made to obtain suitable employment for each individual student before he leaves the Centre. The bureau is in constant touch with the Ministry of Labour, with all the London stores, clubs, banks and kindred institutions, contractors and other large employers of labour, the Police Forces both Metropolitan and Provincial, in fact with every conceivable employment source in the country.

Most men not already placed spend their "fortnight pending" *i.e.*, the last fortnight of their service, armed with letters of introduction provided by the Employment Bureau, calling upon firms likely to require their services. In this way many men obtain employment, but often not until many letters have been proffered without result. It will be seen therefore, that only by the utmost effort on behalf of every individual that a measure of success is possible. A well organised Employment Bureau with an experienced and sympathetic (and this latter is absolutely essential) staff is as necessary to the successful running of a Vocational Training Centre, or indeed of any other form of vocational training, as the instructors themselves.

The following figures obtained at Hounslow during the last four years speak for themselves :—

1923-24	Total trained	231	Obtained employment	184
1924-25	"	403	"	327
1925-26	"	453	"	422
1926-27	"	500	"	473

Now it is obvious that there must be many difficulties to overcome and many unusual problems to solve in an undertaking of this description. Experience at Hounslow goes to shew that selection of students presents a formidable example of the difficulties experienced. That is to say the selection of the student material from which one or other of the Centres is ultimately to attempt to fashion the square peg to fit the square hole. It so often happens that the round peg is sent, and by the time something resembling a square has been fashioned, the material has disappeared. It may be that lack of method is at the root of the evil, but much can be done by the regimental officer to whom the man first broaches the subject of attending a Vocational Training Centre, but more by the officer who makes himself conversant

with the subject and broaches it to the man. It is well when considering an application to find out if possible the trade followed by the applicant's parent or relations. The influence of any one of these might make the difference between immediate employment and months of misery.

Men often apply for training in a trade which is absolutely unsuited to the locality in which they intend to settle. Here again it is essential to impress upon them the necessity for absolute frankness in this connection. It is a sheer waste of time and money to train a man as an acetylene welder, for example, if he insists upon settling in Slocum-on-Mud, or another as a gardener if he is determined to domicile himself in Seven Dials.

In the present state of the labour market no single point can be neglected which may in any way influence a possible employer to accept our man. There is a distinct tendency for men, particularly the short service men, to assume with their civilian clothing a slap-dash "don't-care-a-damn-I'm-out-of-the-Army-now" sort of attitude which the potential employer regards with suspicion and which often makes the difference between acceptance and rejection. Men should therefore be impressed with the fact that smartness, tidyness, cleanliness and courtesy are as very much an integral part of their equipment in civil life as in the Army.

Another great difficulty is money. Men should be encouraged to save systematically. When the time comes for them to get the job which means so much to them and their dependents, it would surprise many of them to know how invaluable that little nest-egg can be. Money is wanted for clothing, train fares, food and lodging, for tools, for all those hundred and one things that sort of just happen in the Service. Sometimes an excellent opportunity is missed, one of those opportunities that seldom come to the same man twice, because a fidelity guarantee is not forthcoming. Officers should therefore use all their influence to persuade the worthy man to provide for the future in this respect. It is the writer's opinion that the old system of deferred pay would be a happy resuscitation, but since it is not available, men *must* be encouraged to save for themselves. It has been pathetic on occasions in the past to receive applications for advances of pay from non-commissioned officers and men within a day or so of final discharge. Such advances are in reality loans, required to enable them to pay a

train fare of, perhaps, a few shillings, so that they might be enabled to interview a prospective employer.

Another point for the regimental officer is the need for care in the preparation of the Employment Sheet (A. F. B. 2066). When preparing the forms, which are, properly prepared, most useful documents, bring out, if applicable, such points as "total abstainer", "possesses ability to overcome unforeseen obstacles", "capable of working well without supervision", and if with initiative say so too. Also indicate plainly the sort of work the man can undertake.

In conclusion it is suggested that the men should be regarded from the very commencement of their service, not merely as so many civilians who are to be converted into fighting units, but also as so many potential civilians who ultimately shall return to civilian life improved, in every way by their military service. In sum, that the net result of their military-cum-vocational training will be a reservist or pensioner who is contented with his lot and proud of his association with the Army in which it has been his privilege to serve.

EARLY DAYS WITH THE EXPERIMENTAL ARMoured FORCE.

By

CAPTAIN A. B. KNIGHT, M. C.

With the reports now appearing in the press from Home, of the doings of the Armoured Force on the plain, it is perhaps a convenient moment to refresh our memories with Brigadier Collins' achievements during the first year of the Force's existence. Great things were achieved but the doctrine of trying to run before one can walk has perhaps seldom been better portrayed than with the Experimental Armoured Force, which was collected for the first time on Salisbury Plain last year.

Let us put ourselves in the position of a Staff Officer with the Force and endeavour to see developments through his eyes. For origin, the Force perhaps owed its inception as much to the writings of such well-known people as Colonel Fuller and Captain Lyddell-Hart and their effect on public opinion at Home, as anything else. Technical developments in cross-country machines happened to coincide with increased interest in these matters on the part of the General Staff at Home, with good results. To the soldier, the possibilities of this force were great and had excited enormous interest, though its protagonists in the press had perhaps over-reached themselves in the interests of word painting and spectacular journalism.

The effect on the public was however enormous, and throughout the operations last summer, special and elaborate arrangements were necessary to control the movements of spectators, and above all their private cars. Even with the aid of a special staff, police, enclosures and elaborate traffic precautions, together with secrecy on occasion, the hampering of operations by spectators could not be altogether avoided. First of all let us get the picture of the Experimental Mechanised Force into our minds, as it was first constituted.

Position in the Spring of 1926.

As we know, the first tanks appeared in France in 1916 and were used in ever-increasing numbers from then on to the end of the war. These early tanks were somewhat crude and though they were succeeded by later patterns, such as the Mark V and the Whippet,

the effect of the conditions in France and Flanders, together with the demand for more and yet more production was to keep design on tried lines. The results were that the first post-war tanks had advanced but little beyond their initial speed of about 5 m.p.h. and the necessity for a complete overhaul every 100 miles with a circuit of action of about 20 miles. But by the spring of 1926 the position was far different. With the advent of the New Sprung Track, the Armstrong Siddeley air-cooled engine and other kindred developments, the Vickers Light Tank had been born.

This had been gradually perfected over two or three years and gave the enormously increased performance of 15-20 m.p.h., for short sprints, a track life of about 1,800 miles and a radius of action of about 120 miles, though the armour had, of necessity, been cut down from that of the old type heavy tanks, which weighed anything up to 40 tons, to the Light Vickers Tank Mark II, weighing about 12 tons. Further experiment had developed the chassis of this machine into the Mark II Dragon, for the traction of guns, particularly medium artillery.

Certain other special war machines, such as the Wheel-cum-Track, and Hathi Four-Wheel-Drive were in the course of development. Aided by the Empire Cotton Growers' Association, the War Office had endeavoured to perfect M. Citroen's Trans-Sahara Kegresse $\frac{1}{2}$ -Track machine and had induced a number of makers at Home to take it up with a view to building up a reserve of cheap cross-country machines in the Empire. At the same time Colonel Martel was busy with the first experimental model of his 1-2 man tank, which was literally built by himself and his wife, in the garage of their house and from their own resources. But perhaps the vital factor was the R. A. S. C.'s development of the Renault 6-wheeler, and the enterprise of Mr. Morris in seeing its possibilities and actually producing his first experimental machine inside a month. This paved the way for the cheap cross-country commercial machine, on which one can truly say that the basis of mechanization rests.

March 1926, when Mr. Morris made his great decision, is perhaps the most important date in mechanisation, since the advent of the first tanks on the Somme some 10 years before. This development of machines progressed steadily during 1926, bringing more firms into

line on the manufacture of 6-wheelers. This type was the sole cross-country vehicle for which they could foresee any commercial use in sufficiently large numbers to offer a reasonable return on their necessarily very heavy initial expenditure in experiments, development, demonstrations and advertisement. All of these would be necessary before the public would take to the new machine, at any rate for use in England. Lloyd and Carden entered the field with a rival tankette to Major Martel, and the Italians showed us their Pavesi machines.

During the winter of 1927, the C.I.G.S. announced his intention of constituting an Experimental Mechanised Force on Salisbury Plain for the coming training season.

His plan was to use existing units as far as practicable to try out the possibilities of the new idea, and to get some inkling of the type of machines and organisation required to obtain the best value from an armoured force. Tactically, the basic idea was to substitute a tank battalion, in lieu of infantry, as the backbone of the force, and to allot such proportion of other arms to assist and support it, as would enable it to carry out the various rôles envisaged.

For the purpose of the initial year's operations, the force was precluded from fighting against other armoured forces, firstly, because other mechanised units were not conveniently available, and, secondly, because it was realised that there was more than enough to be learnt from action against normal formations during the first year's work. The administrative arrangements, which are perhaps more vital to the armoured force than to a normal formation, were fully investigated in Staff Exercises during the winter of 1927-28 and proved of absorbing interest ; as the force had by then, in theory, expanded to 500 fighting machines, which were found to require some 600 ancilliary vehicles to keep them in the field.

Initial Organisation of the Armoured Force.

Brigadier R. J. Collins, C. M. G., D.S.O., whom many will remember as D. M. T. in India, was appointed to command the 7th Inf. Bde. and Mechanised Force, as it was then called. A Tank Corps Bde. Major and Staff Captain, who had also to cope with the usual area administration, comprised the staff, to which additional officers were attached from time to time. The backbone of the

organization was supplied by the 5th Bn., Royal Tank Corps, already stationed at Perham Down, and which was the first Bn. to be completely fitted out with the Mark II Vickers tank. 48 tanks organised into three companies with a special wireless section attached to the Bn. H.-Q. In addition, the 9th Field Brigade (Mech.) at Bulford, for the purpose of comparative trial, was equipped with Mark II dragons for two of its batteries, Crossley-Kegresse $\frac{1}{2}$ -trackers for the third, while the fourth battery was composed of the (then) new Birch gun. Five machines were allotted to each battery and the battery staffs were equipped with Crossley-Kegresse $\frac{1}{2}$ -track cars. The first line transport in either case was ordinary 4-wheeled light lorries, though pneumatic tyres gave them an enhanced cross-country performance. Both the above units were fully trained in the mechanization of their own arm and had had experience over several seasons, while their machines were either new or specially overhauled in preparation for the coming training.

The rest of the force was formed of extemporized units, or those hurriedly adapted to mechanisation; so much so that they were still completing their initial driving in instruction, etc., right through to divisional training. The splendid performance they put up with so little preparation speaks volumes for keenness and efficiency displayed by all ranks. The largest unit involved was the Somerset Light Infantry, who were equipped with Vickers guns, organised into three-section companies. (With one normal draft training company in reserve). Each section was a complete unit of four vehicles, one for the commander ($\frac{1}{2}$ -track car), one for each sub-section and one for reserve ammunition, etc. (All 30-cwt. Crossley-Kegresse $\frac{1}{2}$ -trackers). While the first line transport consisted of Morris 6-wheelers.

Colonel Martel was specially selected to command the 17th Field Company, R. E., more or less on the normal organisation of four sections, but fitted out with Morris and Guy 6-wheelers and special bridging equipment. For this training season, however, recourse had to be made to solid tyred three ton lorries for dragging pontoons, which were borrowed when necessary. It was intended to equip the 9th Light Battery with $\frac{1}{2}$ -trackers, but these did not materialise, and, for divisional training, some Karrier medium 6-wheelers were hired, and the 3.7" hows. and crews just bundled into them.

A special signal organisation was formed embodying various wireless sets mounted in 6-wheelers, (all of the w/t variety) and a large number of motorcycle dispatch riders. Line and visual transmission sections were cut out from this organisation. To begin with, the wireless sets were just ordinary patterns put into Morris 6-wheelers, but later the special tank sets, at the rate of one per Coy. or Bn. H. Q., became available. These were intended to be armoured and mounted on a tank chassis.

The 2nd Bn., The Cheshire Regiment was also available at Tidworth and, though not officially belonging to the Mechanised Force, had been mechanised as far as its M. Gs. and first line transport were concerned ; so that it only required busses for the four companies, each of which were comprised of four L. G. platoons, to render this unit fully mobile for work with the Mechanised Force. The organisation of the light reconnaissance machines presented certain difficulties. The first idea was the issue of the only tankettes available, *viz.*, 8 Morris-Martels and 8 Lloyd-Cardens to the 5th Bn., R. T. C. and to bring up the 12th A. C. Company from the training school at Bovington, comprising two sections of Rolls cars ; the remaining section being on the Rhine.

But in spite of their larger establishment of spare crews, the 5th Bn., R. T. C. found that looking after their own tanks gave them a very full time occupation.

The need for more scouting and reconnaissance machines was apparent immediately the force was organised.

Above all the organisation, training and possible employment of this Light Group offered such scope that a separate commander could well be employed. Before Bde. Training commenced therefore the 3rd Bn., R. T. C. came down to Tidworth to take over the Light Group, comprising Bn. H. Q. and two companies, one of which came fully equipped as an A. C. Coy. with twelve Rolls Royce cars ; while the personnel of the other was brought down to operate the 16 tankettes, which were taken over from the 5th Bn., R. T. C. The 12th A. C. Company was also detailed to come into their organisation. This now comprised :—

H.-Q.

2 Cys. A. Cs.

1 Coy. tankettes.

The Preliminary Training of the Force.

This presented a large number of difficulties as the different arms of the service comprising the force had gradually evolved their own systems, even for the most rudimentary things, such as the ordinary hand signals for road control. Thus everything had to be organised from the start. Brigadier Collins took over on the first of May, and, issued the first preliminary standing orders to the force before the 8th of June. They included such elementary matters as road intervals, the definition of a section as 4-6 vehicles, methods of inter-communication, etc. But, perhaps most important of all, they divided the force up into three groups, on a potential speed basis and allotted a normal rate of march to each.

Normal Rate of March.

Fast Group.—A. Cs. less transport 25 m. p. h.

Medium Group.—Light battery.

Field Coys.

Inf. Bns. (Mech.).

M. G. Bns.

A. C. Coy., transport.

Transport lorries 10 m. p. h.

Slow Group.—Field brigades.

Tank battalions.

Tankettes .. 7 m p. h.

Normal Day's March.

Fast group	..	.. 100 miles.
Medium group	..	.. 50 „
Slow group	..	.. 30 „

These provided disturbing factors for a theoretically homogeneous force, as was apparent throughout the season's operations. They were, however, forced willy-nilly on the commander by the limitations of the various types of machine involved. During this period, the newly mechanized units were training, assisted by dribblets of machines which were delivered to them from time to time. At the same time the Tank Bn. and the gunners were busy "running in" their newest machines and bringing their new drafts of recruits up to the scratch.

The Summer Training in 1927.

Owing to the enormous amount of groundwork to be done by the staff and the backward state of training of the various units newly mechanised, the outings of the force were practically confined to official demonstrations given to the Staff College, the Secretary of State for War and officers on leave from India and to a test march for the tanks. There followed the $\frac{1}{2}$ dozen schemes during Brigade and Divisional Training and finally the Grand Southern Command operations extending over some 72 hrs. of fighting.

There were to have been further operations against the first and second Aldershot Divisions, then training in the Oxford Area, but the heavy rain in the Thames Valley brought these to an abrupt end before the Mechanised Force had left Tidworth on what was to have been a surprise attack ; the secret of which had been very well kept.

During the whole of the early training new ideas were being continually born and scrapped the very same day, as practical experience proved them to be valueless. The fact that it takes a full three years to efficiently train a new unit to mechanisation has now been fully recognised at Home, and will always be allowed for in the time-table when practicable. It does also help the manufacturer who cannot produce non-standard vehicles in large consignments at a time.

The provision of spares is also a considerable problem and it is obviously better to have fewer machines with the necessary spare parts, than more with none. This problem is not, however, as easy as it seems, owing to the lack of stability in design of various types. Ordnance, having been led to manufacture large quantities of spares for the earlier types of tanks, which were left on their hands, are now doubly careful before they let themselves in for other "white elephants." Further, the actual parts of new types of machine are constantly being improved upon, so that what may be perfectly good spares today, are useless tomorrow. Thus, the result seen at Tidworth last summer, of expensive machines, particularly of the $\frac{1}{2}$ -track and tankette types, lying idle for three months or more at a time, was not so avoidable as it appeared. In any case it serves to point the moral against redundancy in types of machine.

The Difficulties of Design.

One of the difficulties of the present stage of mechanisation is to find sufficient fixed foundations on which to build up a sound organisation and tactical doctrine. A tank designer is like a naval constructor, perhaps always a cynic, dreaming in the future amidst a maze of conflicting ideas and knowing that each creation of his hand and brain will be out of date almost before it sees the light of day. Even with such a comparatively simple machine as a motor car, for which all the data are known, he will be lucky if a successful machine materialises inside three years.

For a cross-country vehicle, the problems in dynamics of which are only now being solved, construction is much more difficult; coupled as it is with tactical performance, armour and armament capacity, and the limits set by rail-load gauges, bridge limits and climatic factors. Take the ordinary routine through which a new armoured fighting vehicle is evolved. The demand for a machine for some new tactical purpose arises and is conveyed to the requisite authorities in the War Office. If sanctioned, the project is turned over to one of the special committees, who perhaps take three months to come to an agreed specification. The machine is then rough drawn, taking at least two months, with a third month for checking the drawings.

A wooden "Mock-Up" is built, taking a month to see that there has been no slip between the various departments concerned, and for the tactical people to see what sort of hybrid their idea has germinated into. This takes one month. Alterations are probably required, taking say two months and then the machine is finally drawn in detail taking at least a further couple of months, a total of twelve months in all. But further, the performance of a cross-country machine for most parts of the world is so affected by the season of the year, that adequate data cannot be obtained under a full twelve months' field trial. Thus we have arrived at a full three years before the first production of the new type can be ordered in quantity, much less delivered to the troops.

Perhaps some of us have been unfortunate enough to buy a motor car in the first year of its new model production and have regretted the matter considerably. The manufacturer on the other hand, has quickly spotted his errors and produced a thoroughly good machine

for the next season's sales. But the unfortunate tank designer seldom gets a second chance, except with the semi-commercial types, as, tactically, his machine will be too obsolete to warrant further expenditure in time and labour.

The 5 ton bridge.

Let us follow these difficulties in practice with the Armoured Force. In the early spring of 1927, a new bridging policy was brought out and received the unanimous consent of those in a position to know. We will call it the Three Bridge Policy, as it laid down that the bridge with the army in the field, would be :—

(a) *Light Kapok Floats.*

For infantry assault bridges, etc.

(b) *The Medium Bridge-Open Steel Pontoons.*

For all the forward elements, giving a maximum load of 5 tons.

(c) *The Heavy Bridge-Closed Consuta Pontoons.*

Which could take up to 27 tons or the independent tank. This has pontoons placed side by side, solid, right across the river. Note the novelty of the idea, the old rule that passages must be left between piers, has now completely gone by the board.

This 5 ton bridge fetish caused an immediate demand for the production of light armoured fighting vehicles weighing under that figure and put most of the current types out of court. In vain the designers protested that it was not practicable to produce such a machine and that it would be lacking in all the vital factors of performance and protection. The bridging question being of such vital importance, Brigadier Collins picked on a river crossing as the first tactical problem to be investigated. This took the form of a demonstration of the crossing of the R. Avon and took place just over a year ago. The Staff College were invited to see it.

Colonel Martel, having diverted his brain temporarily from the designing of tankettes, had various of his ideas for trial, such as—

The Tankette Raft of Kapok floats.

His Stepping Stone Bridge.

For full-trackers over shallow streams and

His new Ribbon Bridge.

For light machines.

And last, but by no means least he was prepared to show what the 17th Field Coy. could do with heavy bridging material.

It was a really good drizzly greasy day, typical of the Plain, and though few troops were used, it was of absorbing interest to the Mech. Force Staff as the very first occasion any portion of the force had been out of barracks together. From the very start problems cropped up. Slight cavalry opposition had to be driven in and in the initial advance across-country from Tidworth, the proportion of light reconnaissance machines was plainly inadequate. Who was to do the R. E., reconnaissance, and how.? The Morris 6-wheeler car is too large and unarmoured, while the motor-cycle was obviously out of court. Eventually Major Martel was given a tankette of his own brand to try his hand with.

Let us envisage the scene. After the first wave of covering tankettes the spectators were perhaps most impressed by the rush forward of the O. C., Mech. Force, with his Commanding Officers to his advanced H.-Q.

It was a most grotesque mechanised point-to-point, with all kinds of beasts scurrying across the Plain. The Morris 6-wheeled cars and wireless tender obviously obtained the first places, being followed at a distance by the $\frac{1}{2}$ -track cars and further back still by panting tanks and tankettes. The rear was brought up by some half dozen unfortunate officers condemned to ride motor-cycles, who were having the ride of their lives, not in any way assisted by the fighting order-equipment they carried, or the "Battle Bowlers" which kept slipping over their eyes; for you don't loose your hands from the bars of a motor-cycle going across-country. A £ 10,000 tank is hardly the machine from which a company commander should carry out a discreet reconnaissance of his proposed line of advance. There was obviously much to learn.

But to get down to the river, who was to do the initial covering and who to launch the Kapok floats to get the first parties across? The guns were in difficulties, as the Avon Valley is so steep that you cannot drop a shell into it, except from some way back or down by the water's edge, neither of which suited the Field Brigade, and though tanks could be put down the forward slopes and give good covering fire, they would be considerably at the mercy of enemy guns on the far bank of the river, way back in concealed positions, where Mech. Force guns couldn't get at them.

Most of the manual strength of the 17th Field Company was required for bringing down the heavy bridge and only advisers could be spared to assist in the launching of the Kapok floats. There was no other solution than to temporarily dismount a company of the Somersets and to wish for more tankettes to assist in giving covering fire. Thus early we see the demand for a proportion of infantry with the force.

The crossing of the Somersets, as infantry, was quickly followed by a Morris 6-wheeler which rushed a large built-up Kapok float down to the river, to get the first tankette across. This was a somewhat hair-raising proceeding, as the tankette barely fits the raft, and getting on and off the banks is the real difficulty. The first Carden-Lloyd met disaster, owing to the mistake of a sapper in placing the gang plank under wheel instead of track, and the Morris-Martel that followed did not look any too secure.

They then tried the Stepping Stone Bridge, which resembles a string of hurdles on box-frames, dragged across the river, on which it was shewn that a Vickers tank could cross the shallow water of the Avon. The cream of the performance came with the great Consuta wood pontoons which now came slithering down to the river, on the old pontoon waggons, dragged by 3 ton solid tyred lorries. There were 26 tons of bridging material to handle and yet, inside 70 minutes, the 17th Field Coy. had completed a three span heavy bridge across the Avon and by putting a quadruple pier of covered Consuta pontoons between each span, could easily take a load of 16 tons.

This quite confounded the protagonists of the 5 ton bridge and proved that any normal A. F. V. could be used with forward formations, not to mention the medium 6-wheeler, which the 5 ton limit had put out of court. This great step forward took some time to bring itself to the notice of all the powers concerned. And some of the latest experimental machines now seeing the light of day, are severely crippled as to performance and characteristics owing to their having been designed under the cloud of the 5 ton bridge fetish.

But to get back to the river, the crossing of first elements was still hazardous and though Colonel Martel's Ribbon bridge, then shewn for the first time, was obviously capable of carrying light machines like the Morris 6-wheeler, it was difficult to adapt for heavier loads. But it is a wonderful invention, just a light bearing surface, assembled

from sections and pushed boldly across the river without any floats or supports of any kind. It is only for light motor vehicles, which must be well spaced out and kept moving at a speed of about 12 m.p.h., as the weight of the machine is entirely borne by the 'impact' of the roadway on the surface of the river, which it can only sustain for matter of seconds. A further advantage is that the 'ribbon' is just strong enough to support men, well dispersed, so that the preliminary crossing of a detachment to the far bank can be avoided.

For the initial rush though, something is required that will get across under its own steam without exposing men to the fire of the enemy.

Technically, the problem is by no means insuperable if use is made of floats, which can normally be carried on separate vehicles behind and fitted in a few minutes when required. This has been proved by Colonel Martel's experiments with the amphibious 6-wheeler and various amphibious machines now in use, while the size of the floats is not unreasonable up to a limit of about 15 tons. It so happens that the latest tendencies towards machines of the six-wheel-drive type help the river crossing problem considerably, as, given the initial water speed of about 10 knots, their noses will be driven sufficiently far out of the water to get a grip and so pull themselves out by any ordinary cattle dip along the banks of a river.

The Gun v. Armour Contest.

The tactics and organisation of the Armoured Force are naturally subservient to this never-ending struggle, between gun and armour—as naval design has been since the invention of ironclads. And, though, for the moment, the tank v. field gun situation appears fairly stable, in that any field gun shell of 15 lbs. and upwards will hold a tank with a direct hit, while the field gun's shield is not proof against the tank's guns, there are changes in the air. Firstly, the standard of tank gunnery is improving rapidly and with the new tanks fitted with turret mounted weapons, fire can be directed with great accuracy and control on targets at any angle to their line of advance. This had not been possible with some of the present patterns.

Covering fire has now been organized and any A. T. weapon, once unmasked, must be expected to shift to another position before it can open up again. The spectacle of a horse battery galloping into

action against tanks on a forward slope is now out of place except within a gilt frame.

Though A. P. bullets are not suited for prolonged firing from the ordinary infantryman's rifle, there is nothing to prevent his carrying a couple of clips of these cartridges in a special pouch to slip in when an enemy A. F. V. comes in sight. It does, however, require a brave man to use it, as the shock of discharge is considerable, and he will have to hold his fire till the target is within something like 150 yards.

This devastating news did not filter down to the Mechanized Force till right on in divisional training; all the preliminary training being based on the successful use of a cloud of light armoured machines, such as the then tankettes, for the purposes of reconnaissance, etc. This new idea puts the fully armoured, really light machine out of court and brings the minimum cost of a true fighting vehicle up to several thousand pounds, and a weight of several tons.

The myriads of tankettes, costing a couple of hundred pounds apiece, which the prophets had foretold, are thus ruled out. Special cartridge clips are to be issued to the Third Division, in their training this summer, to represent this new A. P. bullet. The effect of these developments are far-reaching as the A. F. Vs. of many nations do not carry sufficient armour, according to these new standards, while many post-war machines are not bullet-proof. This increase in the thickness of armour affects the infantryman from yet another angle, in that, it is now no longer practicable to produce an infantry A. T. weapon which can be handled off its motor-carrier, whatever form that may eventually take. This renders the provision of A. T. weapons more difficult on the grounds of expense, while being of larger size they will be more difficult to conceal. Again, this means that light machines cannot be armoured all-over, and though you can attempt to armour the man or the engine, it is a very moot point as to which is the most desirable of the two; strong protagonists are to be found for both ideas.

By armouring the man you encourage him to go closer to the enemy than he otherwise might, but he is at the mercy of a bullet through his engine. But if you armour the vital parts of the chassis, some other man from the crew can still carry on in the event of the driver being disabled. Actually the present tendency at Home, is to try out the absolutely unarmoured vehicle and to cut its size and weight in every

possible way. Colonel Martel is trying out his mechanical horse, based on an Austin 7 chassis. A number of the new midget cars, such as the Austin, Triumph, Jowett, etc., are also under trial. Each of which carries two men and a light automatic. Four men can lift them through a hedge with the aid of the special handles provided and experiments are being made with a view to giving them a better cross-country performance, which, with the aid of enormous balloon tyres, is already quite good. One of the most favoured machines, is the Austin 7, with Gordon-England sports two-seater body, so small that it is very easy to conceal. From the viewpoint of mobilization and the utilization of standard tyres, this new tendency is excellent, and we have noticed the ubiquitous Mr. Morris's recent advent into this field.

Marching with the Mechanised Force.

We have all heard of the wonderful mobility of the Mechanised Force and how it can be expected to do an easy 120 miles a day, but I wonder how far those who claim this speed have seriously considered the difficulties of the achievement.

In these days of long range action from the air, even when out of contact with the enemy a peaceful march must be extremely rare. In order to handle the Armoured Force to the best advantage tactically, it was obviously necessary to ascertain what, in actual practice its power of mobility was. This Brigadier Collins set himself to do, as soon as the various new units were sufficiently trained to leave the vicinity of their barracks. The first test took the form of a 30 mile march by a company of light Vickers tanks, under peace conditions. Brigadier Collins formed part of the crew of one tank, while other officers of Mech. Force Staff, who did not belong to the R. T. C., were distributed up and down the column. The last tank was specially fitted out by the medical authorities for testing the interior fumes, etc. Everything was done to ease the travelling for the crews of the tanks, doors were kept open, and a number of the men were accommodated on folded tarpaulins on the roof, with special ropes for them to hang on by.

From the very start we began to learn. The First Aid lorries, 4-wheelers, stuck and had to be sent home, while the Brigadier's 6-wheeler Morris car was obviously too big to try passing a swinging-

swaying tank on a narrow country road. To the unaccustomed, the noise is terrible and the jolting most unpleasant. Several quite unexpected yet vital points kept cropping up. Firstly the light tank engine, though an 8-cylinder, is amazingly difficult to start, and after a standard 10 minutes halt it was no exception to see a section fail to get away together, even after 5 or more minutes delay, and have to leave one or more tanks behind to catch up later. This difficulty was not eased by the problem of inducing tanks to pass in a narrow lane. In practice, the idea of passing by crashing through the hedge is not always feasible; even if it were permitted under peace conditions, for most hedges are studded with trees and the ordinary roadside ditch seldom invites a tank to take it diagonally. But it is the pace that tells and after 15 to 20 miles most of the tanks were in trouble over their steering brakes.

A tank steers by braking one track or the other with an enlarged version of the ordinary motor car brake, fitted with a friction lining. This lining runs hot if overworked and besides failing to grip, fills the inside of the tank with poisonous and very noxious fumes, while in some cases the lining does in fact catch fire. Very unpleasant for the crew and worse for the average speed of a march, as in bad cases halts are necessary for cooling. Brake slips lead to accidents and may necessitate 'luffing' round corners. This will give you an idea as to why, now and again, a tank crashes into a shop window or slithers into a ditch. On a 30 mile run, therefore, with short halts, the average hour's run of a bare 6 miles is all that can be expected with the present types.

So much for the march of a unit, from which much had been learnt. But the first two schemes of Brigade Training brought further light to bear on the difficulties of practice, and took the form of a 30 mile peace march by day, followed by a 30 mile peace march by night, about 8 miles of both being across country. The country was soaking wet and the A. Cs. had to be left in barracks, thus again bringing out the necessity of eliminating all vehicles from the force, which were not capable of the cross-country performance of the 6-wheeler.

Treated as a normal formation, the road space tables were worked out and timings allotted to units, but even then mistakes occurred at the start owing to Unit H.-Q. vehicles not being easily identifiable.

Early Days with the Experimental Armoured Force.

The idea of marching at regular intervals proved impracticable, as it meant that vehicles travelled continuously on their lower gears, overheated their engines and used too much petrol. For this reason the new practice of allowing units to concertina inside their own areas came into force, though it makes it very difficult for the commander to judge his distance. The idea is that going down hill, or on the level, the head of each unit slows down and the tail closes up. On approaching a hill each vehicle accelerates in turn and takes the hill at its best speed, making full use of its weight and momentum in its climb.

Road blocks, whether caused by traffic, breakdown or enemy action, are a frequent cause of delay and annoyance, and great initiative is required from all subordinate commanders to lessen their effects. The officer on the spot must immediately decide on the action required or select a way round. You merely know that the vehicle in front has halted. No one knows why or whether it is in touch with the rear of the rest of the column, or whether even on the right road. It is for this reason that such stress is laid in Mech. Force standing orders, on the 'ticking off' of each cross road passed, on the section commanders' map. But it takes time to get the information down to section commanders and many unforeseen circumstances may cause the route to be changed at the last moment. This again brings out the high standard of training initiative and judgment required from the men of the Armoured Force.

During this first day's march aeroplane attacks were brought off on two occasions, the targets being selected off the map by R. A. F. representatives. The best show was in a deep cutting where a flight of S. S. Fs. summoned by the patrolling reconnaissance plane, put in a most effective attack, flying so low that their approach was completely concealed by the intervening ridge. As then equipped, Mech. Force columns, first the Medium and then the Heavy, could do little against them. The Birch gun is unsuitable for shooting at aircraft immediately overhead and the crew is considerably exposed to their fire. A. A. Lewis guns were not sufficiently allowed for in the organisation of the force at that time; though for the Divisional Training an old type A. A. battery was added which had also its section of A. A. Lewis guns. The Air Force were further utilized to photograph the columns and to determine the degree of camouflage necessary.

In this, a number of curious incidents occurred, for while the canvas cabs of some new Morris 6-wheelers were plainly visible, the Somerset's half-trackers displayed their position most when empty, and their bench type seats and bright radiators acted as reflectors. Once from 3,000 ft., a plane mistook the whole Bn. of tanks for a supply dump, though the one camouflaged tank proved difficult to find.

The night march was most instructive. Road running presents little difficulty, though details of equipment can be improved. For instance, a dim blue tail light, to borrow from the navy's experience, is far preferable to the standard red glow the manufacturer provides and to avoid accidents a tail light has proved necessary. This demands a design which affords full concealment from the enemy and at the same time protects the lamp, that is, by boxing it in at the rear of the vehicle.

The possibilities of driving across country in the dark have to be seen to be believed. With a column closed up, the lights of the leading vehicle are more than enough, and it is impossible from a distance to tell, except by the noise, whether one or more vehicles are approaching. For this sort of work the slow rolling full-tracker is obviously in clover and the motorcycle at its worst.

Intercommunication and Control.

Perhaps one of the most difficult problems was that of intercommunication and control. The essence of such a mobile and powerful weapon as the Armoured Force, being to make full use of its capacity to strike hard and take advantages of fleeting opportunities, as and when they occur. This is no easy matter, when speed of decision and execution are essential, while dealing with a group of columns moving at different speeds and spread out over miles of country. Here Wireless and the Air are of the greatest assistance, though proximity to the enemy may render their use inexpedient, if not actually dangerous.

Imagine the scene. The medium column is motoring quietly along the road, headed by the O. C. in his X-country car, followed a few yards behind by a couple of motorcyclists.

And behind that again, a big R. A. F. Crossley 6-wheeler, aeri-als up, the whole show doing an even 10-15 m. p. h., while away in the distance the drone of the covering aeroplane may be heard.

Take an actual instance. The O. C., Medium Column, asks his adjutant. "Where is the head of the Slow Column now?" The adjutant writes his message and pins it in a special baton-clip, all without stopping, a motorcyclist comes along side and drops back to the radio-telephone tender, which 'Speaks' to the plane.

Within four minutes of having spoken, the information is back in the O. C.'s hands, all without slowing for a moment.

But up and down the column the problem is not so easy. A car is too large and the motorcycle gives the officer, solo, too much to do to ride it, while it is a poor performer across country.

Yet so far the motorcycle wins, owing to its unique gift of turning straight round in an 18 ft. road, without blocking the column in any way, while it can pass a swinging tank with ease.

As the Germans found necessary before the War, a special communication vehicle will be required.

They solved the 1914 problem of long columns of marching infantry, by a tandem 2-seater motorcar, driver in front and one officer behind.

But the new problem is different, affected as it is by the minimum cross-country performance factor, and the necessary capability of turning rapidly in an 18 ft. road, carrying a double stream of motor traffic without checking either.

Still we live and learn, wireless tenders will no longer fold their aerials forward to catch in every tree, and the new coding devices, coupled with the use of a naval code, may permit more use to be made of wireless, in the proximity of the enemy, than has been the case so far.

Should however, a 'Wireless Silence' be ordered, the question of inter-communication between the various moving columns is not easy, especially under weather conditions when planes cannot take the air.

Motorcycle despatch riders are obviously too vulnerable to be used in hostile country, and this means that armoured cars must of necessity be earmarked for what inter-communication the Air cannot affect; obviously a wasteful method, for which no easy solution is as yet apparent on the horizon.

The Desirability of a Uniform Speed.

Early experience with 'road blocks' soon taught the advisability of sticking to the main roads, as far as practicable, even though this involved more mileage.

But, by doing so, the Force arrived sooner at its destination, and in a less harassed condition. And though there are prophets who talk glibly about the Armoured Force motoring straight across country, it will usually be found making the best use of its mobility, on the best road available.

And what is the mobility of the Armoured Force? At Tidworth we have seen armoured cars do 38 miles in 52 minutes, and the necessity of gaining ground towards the enemy, together with the seizing of bridges and other important points, will always necessitate a proportion of really speedy vehicles with the Force. These high speeds, however, are only possible for small numbers of isolated vehicles, which must take great risks.

In an exercise without troops, distinguished soldiers have moved the Mechanized Force some 120 miles in a night, as an ordinary manoeuvre, but is it likely to occur in practice? Let us rather judge the potentialities of the Mechanised Force by what it has actually achieved to date, in the way of mobility, and we shall be standing on firmer ground.

Last year at Tidworth, the Force was sadly crippled by the necessity of running in three columns, owing to the varying maximum speeds of machines. As we saw on several occasions, the Slow Group experienced great difficulty in beating 6 m. p. h., while the standard of 10 m. p. h. for the Medium Group was seldom achieved.

But let us look further, what is the goal towards which we aim, and by what standard shall we judge?

The basis of mechanisation is the semi-commercial vehicle that can be picked up in large numbers from civil life on mobilisation.

The X-country 6-wheeler appears to adequately fill this bill. Here we have a robust road machine, with quite a good X-country performance. On the road it will average 20 m. p. h., in small numbers, and can be whacked up to some 35 m. p. h. for short distances.

We can assume that in company it will average 15 m. p. h., and let those, with recent experience of attending the Derby by car, estimate as to whether this speed is ever likely to be exceeded, by a heterogeneous force of some eleven hundred vehicles, even when unmolested by the enemy.

Let us then assume this 15 m. p. h., to be the practical limit of speed which the Force, as a whole, is ever likely to achieve, with our present knowledge and conditions.

On one occasion last year, at a critical moment, the tanks and dragons were some 6 hours behind, while on more than one occasion was the Force seriously delayed, by some normal 4-wheeled vehicle which stuck in a narrow lane.

This serves to point the moral that the 6-wheeler is the machine by which the Force must be judged, and that all types which have not the road and X-country performance of the standard 6-wheeler, must be sternly eliminated from the Armoured Brigade, whatever their other claims and qualifications may be.

Summary of Points to Date.

The Mechanized Force has achieved a great deal more than appeared possible in the first year of its existence, though there is yet much to learn.

Perhaps the main point is that infantry will always be required for assisting in bridging, protection at night, guarding prisoners, dumps, etc.

As to mobility, the Mech. Force has not yet achieved 10 m. p. h., while 15 m. p. h. appears to be the limit of its possibilities. And it has yet to prove that it is faster than cavalry, in the presence of enemy opposition.

For the future considerable reorganization is obviously necessary, even from the experience gained in the past year's work.

Finally, it is obvious that it is the character and capacity of the commander and the man that is even more vital than before.

SOME NOTES ON AIR MATTERS AFFECTING INDIA.

By

SQUADRON LEADER E. J. HODSOLL, R. A. F.

INTRODUCTION.

The development of the air has been so marked and continuous of recent years that the problems confronting any country, from a defence point of view, must change with alarming rapidity. A constant watch on the situation is necessary. India has filled the rôle of interested spectator for several years, but there are signs that she is proposing to take a more active part in the world of aeronautics, and it is hoped that the following notes may be of general interest, mainly from a military point of view, but also to some extent from a civil aspect. A selection of some of the more important subjects will be discussed.

1.—THE SITUATION IN THE MEDITERRANEAN.

At first sight this subject may seem to be somewhat irrelevant : a closer examination will show, however, that it is a matter of intimate concern to the Indian Empire.

When the German High Seas Fleet surrendered to Admiral of the Fleet Lord Beatty after the Armistice and subsequently committed suicide at Scapa Flow, the whole strategical situation underwent a violent convulsion. For reasons that are too well-known and too obvious to need reiteration, the centre of interest shifted to the Mediterranean and the Far East. The disposition of the capital ships of the Royal Navy was accordingly altered, and the main battle fleet is now located in the Mediterranean. The Mediterranean is the high road to India from England, Europe and America.

But Great Britain and the Empire are not the only parties interested in this narrow sea.

France, by reason of her North African colonies and their potential reserves of fighting men—so vital to her army—has a very large stake in the claim ; Italy also, by reason of her lack of raw materials, her overseas colonies, and her need for expansion, is just as interested.

The Mediterranean has, in fact, become the cockpit of Europe.

There is one aspect of this problem which the British Empire cannot regard with complacency ; the aerial situation in this area. It has been an axiom that command of the sea is essential to the maintenance of overseas trade in war : it is no exaggeration to say that command of the sea alone in the Mediterranean will no longer suffice to keep open and maintain this vital link in our communications. Command of the air is also necessary. How do we stand in this respect ?

We have an aircraft base at Malta, we have aircraft carriers attached to the Mediterranean Fleet, and we have aircraft in Egypt and Palestine. Malta is within easy striking distance by air of Italian territory : Syria adjoins Palestine. What of the two other countries most intimately concerned ?

The French Assistant Military Attaché, at a lecture at the R. U. S. I. in 1926, discussing the problem of the North African colonies as a reserve of man power in war, and the question of transportation across the Mediterranean, stated that :—

“ The cheap and sure weapons, in our estimation ” that is, for ensuring the safe conduct of these forces “ are mainly the submarine and the aeroplane, assisted by a certain number of very fast cruisers.”

It may not be out of place to note here that the total establishment of first line aircraft in France, Syria, and North Africa is estimated at 1,434 machines, with a war reserve of 1,400 machines. The French are building up a network of commercial air lines in the Mediterranean, which means the establishment of bases at convenient spots : Corsica especially being regarded as of considerable importance.

A study of the map will show very clearly that aircraft, operating from bases in the French Midi and North Africa, bases sheltered from naval bombardment, might command a large area of the Western Mediterranean.

Italy, as the frequent speeches of the Duce testify, is trying to build up a large air force and is rapidly opening up new bases in Italy and Sicily and also in Tripoli. She can, in the same way, exercise command over a large stretch of the middle and eastern portions of the Mediterranean.

In this connection, the recent cruise of 60 Italian flying boats in the Mediterranean is not without interest.

Therefore this situation confronts us : if we were at war, despite our preponderance in naval strength our lines of communication between England and India *via* the Mediterranean, both sea and air, might be subjected to complete or partial interruption. Then we should have to use the Cape route, with all its inconvenience of greater distance and longer time. And so it will be realized that India's interest in the air situation in the Mediterranean is a vital one.

A natural corollary to this is the importance of establishing airship bases in India and Africa. Supposing such a situation as has been suggested were to materialize : India would be cut off from communication with England, to a very serious extent, at a time when quick communication might be vital. If an airship service were running, a vast saving in time could be effected, even though the Mediterranean route were closed, by using airships on a route across Central Africa and on up to India. Should this prove impracticable, an airship service *via* Cape Town would be infinitely faster than the all sea route. Even a service *via* Canada, Hongkong and Singapore would save time on the older and slower methods of transport.

As the capacity of airships improves, so will it be possible to reinforce India with aeroplanes and to a certain extent with troops, even though the Mediterranean be closed.

It will be seen, therefore, that the airship route to India *via* the Cape might be of vital importance quite apart from the commercial possibilities, which, considering the number of Indians in British Africa, must in all probability be considerable.

It will be argued that if we were at war it is conceivable that no airship would be safe in passing over Europe, this may be quite true, and it is perhaps equally important to develop the air route *via* Canada and the Far East, since such a route would be practically immune from interference by hostile aircraft.

The converse of this situation is quite conceivable. Supposing India was required to assist the mother country at a time when reinforcements could not proceed *via* the Mediterranean, then the proposed airship routes, would again be of equal value.

Quite apart, then, from the point of the view of the easier and quicker commercial exchange in peace time, there is or may be, a very real necessity for the establishment of airship services in war time when other forms of communication have been interrupted or rendered too hazardous for use.

2.—THE FLYING BOAT OR SEAPLANE IN INDIA.

India has a coast line of some 4,000 miles : on this coast are various ports which are of the utmost importance to India, for a variety of reasons which are too obvious to need repetition here. These ports are defended ports : i. e., a number of personnel and a certain amount of coast artillery are maintained for their defence. Such defences are costly and are, in the main, more unproductive than most kinds of military expenditure.

Against what are these defences maintained ? presumably against aggression by sea. And what form is such aggression likely to take ? The naval base nearest to India is, or will be, Singapore ; Aden may be included also, in its character of a refuelling station. Both these places belong to the British Empire. What then have we to fear ? An attack by enemy raiders, such as occurred at Madras during the Great War. There is a certain definite risk.

India, with her vast coast line, appears to offer considerable scope for the use of the seaplane or flying boat. There are certain areas of coast line which are generally unsuitable for the operation of land planes, but which are perfectly suitable for the operation of sea aircraft. The stretch from Bombay to Karachi is perhaps the best example. Modern seaplanes and flying boats can carry torpedoes, so also can aeroplanes. The latter are more unsuitable for coastal work through their inability to land on the water and remain afloat.

The chief objection to fixed armaments, such as are normally installed at defended ports, is their immobility and their inability to defend any other part of the coast but that in the immediate vicinity of the port. A further point is that a large capital outlay is necessary to instal these armaments and that in due course they become obsolete. Frequently, because the capital outlay is so heavy, port armaments have to remain obsolete for many years.

It is suggested that it might be feasible to reduce the heavy armaments at these defended ports, substituting flying boats or seaplanes carrying torpedoes; such craft could be used in peace time for the operation of coastal commercial services. The very rapid power of concentration which aircraft possess would reduce the risk of having any port undefended on the outbreak of war, and concentration could normally be made before war was actually declared. These aircraft would patrol certain large areas continuously during the hours of daylight—and darkness as well—and it would be almost impossible for any hostile vessel to approach within striking distance undetected. In fact the risk would be less than it is at present.

The great point about employing the suggested mobile armament for coast defence is that practically the whole coast can be protected, and that any given danger spot can be reinforced rapidly by all or a part of the total strength. With the ordinary fixed armament this is naturally impossible.

If this proposal were adopted, it is claimed that it would result in considerable economies, and would turn part of India's defences into a commercial proposition in peace time.

It will be pointed out that monsoon conditions may make parts of this scheme impossible: it is agreed that difficulties may arise because of weather conditions, but with the improvements in the design of aircraft and in the art of flying, those conditions can be and are being overcome.

3.—AIRCRAFT AND THE ROYAL INDIAN MARINE.

The Royal Indian Marine has recently been reorganized and at the outset is to consist of a small number of sloops and patrol vessels. Its rôle is to assist the Royal Navy in the defence of India which means, in effect, that it will undertake patrol duties in the vicinity of the Indian coast. As has been pointed out already, the coast line of India and Burma measures some 4,000 miles and for its protection it relies on certain coast defences and on the East Indies Squadron, to whose upkeep an annual contribution is made. To this is to be added the small forces quoted above.

The East Indies Squadron has a vast area to guard and cannot be in more than one, or at the most two, places at the same time, if there is a risk of meeting an enemy in any

strength. Even if the squadron were dispersed, the area to be covered is so vast as to allow much margin to an enemy raider. For practical purposes and considering the possible enemy opposition the forces are adequate, provided that they can contrive to meet the enemy. This is always a doubtful proposition when the area to be watched is considered in relation to the capabilities of modern cruiser-submarines or fast raiders.

This preamble leads up to the point that there is no question but that aircraft would be of incalculable value in helping to—

- (1) Cover the area to be patrolled.
- (2) Attack the enemy if encountered.

The radius of action of vessels would be very greatly increased and the general offensive capabilities of the forces enhanced.

The light cruisers of the East Indies Squadron carry one machine each, but this is not enough. It is suggested that it would be both economical and practical for one or more small aircraft carriers to be added to the strength of the Royal Indian Marine at an early date: it is not suggested for one moment that a carrier of the type at present used in the Royal Navy should be purchased. For one thing the cost would be prohibitive, for another it is considered that these huge floating aircraft depots are only a transitory stage in the development of this type of craft. Their disadvantages are enormous. The latest United States Navy carrier is reported to have cost £ 9,000,000. Too many aircraft are locked up in one sinkable unit. We suggest one or two small and fast aircraft carriers, with an establishment of 6 or 12 machines. Such vessels would be reasonably economical to build and would, it is claimed, be of much greater value in the defence of India's coast than the present forces. The machines could be either aeroplanes or seaplanes and a proportion at least should be capable of carrying a torpedo.

It is suggested that a country like India, which has a vast burden of military expenditure to shoulder no very great naval peril to face, and is not justified in maintaining a large navy as well as an army, would do well to consider the advantages of small aircraft carriers.

The small aircraft carrier, such as has been pictured, is yet to be designed, but there do not appear to be any insuperable difficulties

in its construction. The main features should be a reasonable speed—about 25 knots—and an armament sufficiently strong to deal effectively with any armed raiders likely to be encountered. India's needs are in some ways peculiar ; it is against all principles to turn out freak vessels if it can be avoided, but an aircraft carrier on the lines that have been suggested should prove a very serviceable vessel for Dominion navies generally. Most of our Dominions and Protectorates possess a sea-coast and are faced with a limited military budget. At the same time they must make provision for local and coast defence, although the capital ships of the Royal Navy will ensure, to the best of their ability, immunity from attack on a large scale. The small aircraft carrier appears to be very suitable and economical from all points of view and will greatly increase the area that can be kept constantly under watch. In this way one of the gravest defects in the present type of patrol vessel will be remedied—small radius of action and limited offensive capabilities.

4.—THE EVOLUTION OF AIR POWER IN FRONTIER POLICY.

The Royal Air Force has been responsible for the security of Iraq for the last six years, and looking back over the events which have happened it cannot but be acknowledged that the experiment has been highly successful and economical. Just recently it has been decided to extend this principle of air control to the Protectorate of Aden, so that it appears that the Cabinet of the Imperial Parliament is gaining confidence in the capabilities of its newest service. The question naturally arises then, as to where else the Royal Air Force can assume the major responsibility for defence within the Empire, with the corresponding reduction in expenditure which is so desirable.

The North-West Frontier of India comes naturally to the mind, and it is proposed to give brief consideration to the possibilities of this situation.

The examples of Iraq and Aden have been quoted : in the first place, then, let us try to draw a comparison.

The kingdom of Iraq is a mandated territory : in other words we are holding it in trust for the League of Nations, until such time as that body considers that the kingdom is sufficiently developed to stand on its own legs. Then what is our responsibility ? Firstly, to maintain law and order within Iraqi borders

and to repel any attempts at external aggression or encroachment. Secondly, to assist in the economic development of the country. Thirdly, to train the inhabitants of that country to govern, defend and look after themselves. Fourthly, to establish some form of reasonable and popular government.

The first and most important factor in the development of the country is the security of peace, both within and without. The next, the establishment of economic stability. But since Iraq is only a mandated territory, and at present a very poor one (financially) the problem is difficult and is not one of such intimate concern to the British Empire : in other words, the impetus for development must come from the Iraqi himself, we cannot impose it on him, we can only help him to the best of our ability. Our primary aim is the maintenance of law and order, in the most economical way possible, and the giving of every assistance to the economic development of the country. We want to enable the Iraq Government to take over from us the entire control of Iraq territory in the shortest possible time. Whether such a solution is ultimately practicable is outside the scope of these notes.

Aden is a British Protectorate. It is a vital part of the British Empire, as it is one of the defended links in the chain of Empire communications with the Far East. Aden consists of a British garrison and Residency jammed together at the foot of a precipitous rock, and a vast hinterland inhabited by semi-civilized tribes. Since we are responsible for the safety of these tribes and are morally bound to protect them from aggression, the use of air power is readily understandable : the terrain in the hinterland is inhospitable, to put it mildly, and the garrison, as it existed, formed a holding force for the actual port of Aden rather than a police force exercising control over the whole area.

In any case the Aden Protectorate cannot be called either a fertile or desirable locality : its interest to us, as has been stated, lies in its location on the Imperial lines of communication.

Now we come to the North West Frontier.

In the first place this area is a definite part of the Indian Empire and therefore of the British Empire. In the second place, speaking of the territory across the Administrative Border, the North-West Frontier consists of wild and mountainous country. It

is with difficulty that a precarious livelihood can be extracted from the barren hillsides. The inhabitants of this tract of country are warlike and independent, a natural result of the conditions under which they live. But bordering on these mountain fastnesses are fertile valleys and plains: with a population containing many prosperous elements. In fact there is every inducement to the hardy liver to live at the expense of his more prosperous neighbour.

It is obviously to the peace of the cis-administrative border dweller that his more pugnacious neighbour should be persuaded to live a less warlike existence. This means that we must try to introduce civilization where none exists.

How is this being done? By the building of roads and the general facilitating of intercourse between the plains and the mountains. Since the mountains are economically unproductive, it is to the interest of the mountain dweller to stake out a claim in the plains, and if communication is easy he will do this.

Briefly, the policy of the Government of India in their efforts to pacify the Frontier is to civilize it by facilitating safe inter-communication between the hills and the plains.

It has been well said that civilization is marked by three stages. First the missionary, second the road, third the railway. On the North-West Frontier this dictum might be modified to read: first the soldier, second the road,—perhaps third will be the aeroplane, who knows? Where do the Air Force come in, then?

When you begin to build roads through a country inhabited by a wild and warlike people, even though they are nominally your subjects, you have got to protect the road builders. This is generally done by (a) local protection, (b) a mobile garrison located in some fairly central tactical spot. It is difficult to see how aircraft can be used as substitutes for the protective parties on the ground in this early stage of the proceedings.

However the Air Force has its uses. In the first place punitive operations can be carried out far more economically and far quicker by aircraft than by the older methods, and it is becoming generally recognized that in cases of tribal disturbance necessitating military action the Air Force shall be employed first.

Secondly, as the civilization of the Frontier progresses and the roads are completed, there is hope that the necessity for some of the garrisons in tribal territory will disappear : the system of Khas-sadar posts will be extended, and the present system of local tribal protection expanded. Such a system, though it has proved excellent, requires a backing of regular armed forces, and here it is thought that the Air Force will be adequate. Regular patrols can be made on an extended scale, as is done on a small scale now, to see that the protective posts are occupied and that all is well. Any trouble or difficulties, at any place, can be swiftly dealt with by aircraft. Political officers can sometimes accompany these patrols, and landings can be made at places like Wana and Razmak, and other grounds which it may be possible to construct. In this way, necessity for maintaining garrisons may gradually disappear in this part of the country ; the whole area could then be organised in a net work of landing grounds linked up by air communications.

This process must necessarily be slow and, as has been shown, it is in a somewhat different category to the problems confronting us in Iraq and Aden. But though slow it is on the lines that have already proved successful, and when the road-making schemes are completed it is thought that a gradual increase in Air Force responsibility, more or less, in the rôle of policemen, will come about.

5.—THE NORTH EAST FRONTIER.

While on this subject, a short note on the North East Frontier may be of interest.

Here the problem is in a very different category. In the first place the terrain is such as to make an attack on India from this quarter, in any force, practically impossible. There are hardly any roads of any kind, the country is dense forest and very sparsely populated. The neighbouring country is that extreme eastern province of China, Yunnan. The likelihood of aggression from this quarter in any force is, in consequence, unlikely, and the most that is to be feared is the infiltration of Soviet agents should China go "red" at any time. There must always remain certain needs from the internal security point of view.

From a flying aspect the conditions are not generally very favourable ; meteorological conditions are extremely severe and at the present time, in certain parts of the country, about five months

out of the twelve are very unsuitable for flying because of the rains.

Landing grounds are difficult to site and are equally difficult to keep serviceable while the rainy season lasts. The "dry belt" is the only part of Burma where the flying conditions approach to the normal.

The country is covered with dense vegetation and observation from the air is liable to be very restricted.

All these difficulties of ground movement due to the lack of roads and other communications, make it especially desirable that the country should be opened up to aircraft, for if any military action is required the difficulties confronting the operations of ground forces will be very great, as the history of the Burma expeditions will show. And although flying conditions are difficult, there is no doubt but that the difficulties can be overcome. Experiments are being made to see whether it will be possible to make swampy landing grounds serviceable at all times, by putting tarmac on the surfaces. We hear that such an experiment has been carried out with success in America, and there would not appear to be any vital objection to the scheme provided that the tail skids of aeroplanes can be suitably modified to stand the extra strain.

The heart of Burma can actually be reached from India, by air, by either of two routes. One going down the coast to Rangoon and thence north to Mandalay, the other and more direct route crossing over the Naga Hills.

Burma, then, for the reasons set out above, is not such a potentially suitable place for the eventual assumption of air control, as is the North West Frontier; but it is necessary that Burma should be linked up by air route to India and that internal air routes should be laid out in the country itself. As the interior is developed and conditions become more favourable, so can the influence of the air be increased. It is possible that civil aviation may help to open up the country also and provide swift communications between important centres at present entailing long and laborious journeys, mostly by river.

With Burma then, as with the North West Frontier, though the process may be infinitely slower, it is believed that ultimately there will be scope for an extended system of air control and for the development of civil aviation generally.

MILITARY NOTES.

ABYSSINIA.

The Lake Tsana Dam Question.

A brief summary of the facts in connection with this question may be of interest.

1. *Object of the Dam.*

Only about one-fiftieth of the water which flows *via* the Blue Nile into Egypt comes from Lake Tsana, a fact that has caused some people to suppose that the damming of the Lake would be useless, and that all the bother over it is unnecessary. Actually the dam, by increasing the storage capacity of the Lake, would enable the flow of the river to be regulated sufficiently to avoid dangerous floods in wet seasons, and to make up the deficiencies of any dry seasons, while the lower and slightly increased range of levels would tend to decrease the area of swamps and render the district through which the river flows more healthy.

2. *Outline of the negotiations.*

Negotiations with the Abyssinian Government for the construction of this dam started as long ago as 1902, when, in an exchange of Notes with His Majesty's Government, the Emperor Menelik made the formal statement:—"That there is to be no interference with the waters of the Blue Nile and Lake Tsana except in consultation with H. B. M's. Government and the Government of Sudan; that in case of any such interference, all other conditions being equal, preference will be given to the proposals of H. B. M's. Government and the Government of Sudan, and that His Majesty, the Emperor Menelik, has no intention of giving any concessions with regard to the Blue Nile and Lake Tsana except to H. B. M. and the Government of Sudan, or one of their subjects.

This agreement was incorporated into the treaty signed on 15th May, 1902, delimiting the frontier between Abyssinia and the Sudan. This treaty is the bedrock upon which the whole question rests.

In 1906 a tripartite agreement was signed between Great Britain, France and Italy, under which the signatories agreed to maintain the political and territorial *status quo* in Abyssinia, and to abstain from

all interference in her internal affairs. The three Governments further agreed "To safeguard the interests of Great Britain and Egypt in the Nile Basin, more especially as regard the regulation of the waters of that river and its tributaries, without prejudice to Italian interests." These Italian interests related to Italy's desire to construct a railway joining Italian Somaliland and Eritrea. After the conclusion of this agreement the illness, and subsequent death in 1913, of the Emperor Menelik prevented the negotiation for the dam coming to any definite conclusion, and matters dragged on until in 1925 the British and Italian Governments, by an exchange of Notes, undertook to support each other in respect of the Lake Tsana project and the construction of the Italian railway respectively. The contents of these Notes, when communicated to the Abyssinian Government, were misunderstood by them, and they at once became filled with apprehension that Great Britain and Italy were conspiring to divide the country between them. As the result they appealed to the League of Nations, which replied that the matter did not seem to come under their jurisdiction.

3. *The recent negotiations with the United States.*

A few months ago those interested in this subject were startled by the sudden announcement that a contract had been signed with a firm of American engineers for the construction of the dam. The Abyssinian Government having carried out these negotiations behind our backs, such a contract was clearly a breach of the treaty of 1902. It now appears that what actually happened was that the Abyssinian Government thought they would try to build the dam themselves and accordingly sent a representative to America to get the project financed and contracted for. Needless to say, American financiers said they would only finance it if there was proper security—a word not understood in Abyssinia. All that actually happened was that a form of contract with the White Engineering Company was drawn up, but not signed. The White Engineering Company have behaved perfectly correctly in the matter, and it is clear they are a reputable firm and have no wish to go against British interests. It is possible that for them to construct the dam would provide a suitable solution to the problem, since it would to a great extent allay Abyssinian suspicions, while control of the enterprise would automatically remain predominantly in British hands since those carrying out the work would be at the mercy of the Sudan for the security of their capital.

Experiments with the Morris Six-Wheeler.

In the early part of 1927 a Morris six-wheeler lorry was ordered for commercial use in Abyssinia, and duly reached Addis Ababa, the capital, which lies almost in the centre of the country, by rail. An account has been obtained from the Secretary of the British Legation in Addis Ababa of two attempts made under full load to reach Fiche, 70 miles to the north from the capital, which throws some light upon transport conditions in Abyssinia and upon the capabilities of this lorry.

Nature of the Country.

Abyssinian country consists of—

- (a) Valleys so steep—2,000 to 3,000 feet deep—that even men and mules must seek a spur between the main stream and an oblique tributary to descend and cross.
- (b) Passable country strewn with boulders. Within this category must be included large chasms in the lava field which are circumventable, or, if not, can be bridged, being narrow. In this terrain there are also streams with steep banks which can be bridged or having ramps cut down to the water-level and solid bottoms, are generally fordable.
- (c) Undulating country where the streams are debouching from the hills and have not yet reached the plains. These are shallow and have gentle banks and can be crossed as under (b).

In the dry season the main problem is one of finding a way over or through the boulder area. In the wet season waterways are much swollen and the rough bridges of the country are swept away. Though there are few bogs, there is great difficulty with mud, and particularly near crossing places over obstacles where large numbers of animals are continually passing, the depth of mud becomes serious. The rain in the rainy season is steady, but not violent for long periods. At the higher altitudes at least the small rivers present no serious obstacle during the rainy season, except for a few hours after a heavy fall.

The route traversed between Addis Ababa and Fiche appears to have been a fair sample of travel conditions in the country generally. From Addis Ababa, which is 8,000 feet above sea-level, there is a road to the Entotto Range. This range rises up to 10,000 feet, and the road climbs it in zigzags with a maximum gradient of 1 in 6. The

surface of the road is unmade. The road ceases at the top of the ridge, and beyond, for the greater part of the journey to Fiche, is merely a defined track ; it crosses first a flat plateau cut by streams then the north downward slope of the Entotto, with gradients of 1 in 4 and 1 in 5 then wide stretches of flat country often covered by stones and interspersed by many rivers, some of a depth of 6 feet.

Experiences with the Morris lorry.

The first attempt to reach Fiche was made between 13th and 15th July. The journey was commenced in dry conditions, and it was hoped to complete the trip before the break of the imminent rainy season. Owing to difficulties and delays the lorry was overtaken by the rains and forced to return to Addis Ababa, after proceeding only some 35 miles.

The chief points noted during this journey were—

- (a) Driving after the rains had started was exceedingly slow owing to the mud, and this, with driving over stones, threw great strain on the driver. This attempt failed more on account of the exhaustion of the solitary driver than because of any fault in the machine.
- (b) No difficulty was found in getting through the mud in most places with chains, nor in crossing many of the rivers before they were swollen excessively. The rivers were crossed either by rough bridges or by running down sloping banks and driving through the water. One gap where the bridge had been washed away was 8 feet wide and 2 feet 6 inches deep. The front wheels vanished under the water, but the hind wheels ground on slowly and the lorry emerged successfully.
- (c) Unnecessary delay was caused by carrying no spare parts.
- (d) A small amount of labour on the route, clearing stones, improving banks, etc., would have greatly increased the rate of progress.

The second attempts to reach Fiche was carried out after the rains were over. The problem then was quite a different one. During the rains the ground was so covered with water that the wheels of the lorry were continually washed and no slipping occurred ; after the rains large tracts of the country had dried up, so that, to an ordinary car, it would have been possible to proceed up to 30 miles per hour

between the bad places, but the bad places had become much worse than during the heavy rains, for the mud was greasy, was lifted by the chains, and soon choked them. Further, when the lorry had passed through a bad place and reached the dry ground with its chains clothed in mud, the mud picked up gravel which hardened in the sun, and, presenting a flat, cement-like, smooth surface, resulted in considerable slipping when the lorry entered a further patch of mud. During this trip mud-holes, which had been traversed previously, proved serious obstacles, particularly the type which just fitted the front wheels or just fitted the four rear wheels. The lorry in such a hole found itself unable to go forward or backward unless the chains happened to be on; even with the chains on, if the back wheels just fitted the holes, only digging or jacking could extract the vehicle. The lorry finally reached Fiche, but only after a delay of 30 hours due to inadvertently slipping into a mud-hole 6 feet deep, whence it was finally rescued by the use of jacks and the building of a stone bed under the axles.

The points noted during the second journey were :—

- (a) Reconnaissance of the route was essential to prevent running into mud-holes.
- (b) When climbing out of holes the lorry had difficulty in riding over sharp vertical angles, and cutting away of far banks proved necessary.
- (c) The roughness of the roadway tended to throw the steering wheel out of the driver's hands. A Renault touring car which traversed the same route found twin tyres on the front wheels of great assistance in negotiating rough stony passages. This adjustment might have assisted the Morris.
- (d) The lorry with chains proved very slow over dry ground, and without chains could not negotiate mud. Speed in the drill for taking on and off the chains became important.

Conclusion.

Whereas hitherto an impression has prevailed that troops operating in Abyssinia would be obliged to depend almost entirely upon pack transport, it appears from a close study of this report that a successful M. T. service could be operated in Abyssinia, at any rate for a great part of the year, using six wheelers. Undoubtedly with

experience, preparatory work on the routes, proper equipment, and organised columns containing spare drivers and labour, many of the difficulties which this lorry met with could be overcome.

ARABIA.

Nejd.

There has been a marked improvement in the Iraq-Nejd situation during the past month. Ibn Saud has notified his willingness to meet Sir Gilbert Clayton to discuss matters at issue between Nejd, His Majesty's Government and Iraq, and the meeting is to take place at Jeddah early in May. Meanwhile, in spite of rumours current early in the month concerning the northward movement of Akhwan concentrations, there have been no further raids into Iraq or Koweit.

South-West Arabia.

As a result of proposals made by the Imam, through the Sultan of Lahej, a truce has been arranged, and preliminary conversations have commenced for the purpose of arriving at a settlement on points in dispute between the Imam and His Majesty's Government.

On 13th April, the acting Resident at Aden left for Taiz where he carried out informal discussions with the local Zeidi Commander. The acting Resident has now returned to Aden and his telegraphic reports indicate that the Imam seems inclined to adopt a less uncompromising attitude than heretofore on the question of withdrawal from the territory in the Aden hinterland now occupied by his Zeidi forces.

AUSTRIA.

Organ of Liquidation.

The Organ of Liquidation ceased its executive functions on 31st January, but remained in Vienna until 29th February in order to draw up its final report. There still remain certain questions outstanding, for the solution of which the Austrian Government has been given until 1st July next. It will be necessary for a Commission to visit Austria after this date to verify compliance on the part of the Austrian Government. With the disappearance of the Organ of Liquidation in Austria, military control of the ex-enemy States is now at an end. The British Military Attaché, Budapest and Berne, assumed the additional duty of Military Attaché, Vienna, on 14th March.

BELGIUM.

Strength of the Army for 1928.

A Royal Decree of 27th December 1927, lays down the maximum establishment for the Belgian Army, including the Army of Occupation in Germany, as follows:—

Regular officers	..	..	4,163
Volunteers and re-engaged men	..	..	16,000
Annual Conscript Contingent (<i>Miliciens</i>)	..	..	40,000
Maximum total	..	..	61,000

5,000 Reservists (*Rappels*) are to be called up for refresher training in 1928.

Mechanization.

Tractor trials.

According to the official notification, tractor trials are to take place in May, 1928, in order to select tractors of two types for certain artillery units. Tractors are to be capable of drawing artillery material weighing up to 4,000 and 6,000 kg. (8,800 to 13,200 lbs.) respectively, either separately or in sections. They must be able to move at a rate of $1\frac{1}{2}$ to 6 miles per hour over badly shelled ground, and must be able to maintain a speed of 12 miles per hour on ordinary level roads under normal conditions. They will be required to convey their loads from 40 to 60 miles on fairly hilly roads at 9 miles per hour. The trials will take place in the vicinity of Brussels and at the Camps at Beverloo and Elsenborn. Invitations have been extended to British firms to compete.

In 1929 it is proposed to issue one Corps Artillery regiment with 50 tractors; two further corps regiments are to be mechanized in the subsequent two years.

In peace, a Belgian Corps Artillery regiment is organized in 4 *Groupes*, each of 2 batteries, as follows:—

- 1 *Groupe* of 75 mm. (G. P.) Q. F. guns.
- 1 ,, 105 mm. ,, ,, ,,
- 2 *Groupes* of 155 mm. Schneider howitzers.
- 1 Depot and Park battery.

Artillery officers and non-commissioned officers are already being trained at the Army M. T. Centre.

Belgian Army Reform.

The evidence of General Galet, Chief of the Belgian General Staff, before the Mixed Commission on Army Reform.

The present state of national defences has been discussed with considerable vehemence in the Belgian Press for the past year.

Articles in the Monthly Intelligence Summary have dealt with the recent political crisis in Belgium over the proposed reduction in conscript service, and the subsequent appointment of a Mixed Commission to investigate the whole question of national defence (see Vol. 12, No. 2, December 1927, page 29 and Vol. II No. 6, Octr. 1927, page 199). The Commission consists of 9 Officers and 17 Deputies.

The evidence given last month by General Galet, the Belgian Chief of the General Staff, has now been published in the Press.

General Galet's Evidence before the Mixed Commission.

(a) Composition of the Army.

A fortress artillery regiment has lately been created at Liège; before long others will have to be created at Antwerp and Namur.

(b) Annual Contingent.

The whole of the troops under peace conditions are formed from an annual conscript contingent of 44,000 men, which is reduced to 40,000 on account of various forms of wastage.

Of the annual contingent of 44,000—

23,040 are serving for 10 months.

12,360 „ „ „ 12 months.

8,600 „ „ „ 13 months.

This wastage is very high at the commencement of the calling-up of the contingent, when owing to medical inspection 8 to 10 per cent. are discharged as unfit.

From the contingent one must also strike out roughly 8,000 men who are utilized for carrying out barrack services, 200 priests who become stretcher-bearers, and about 2,000 intellectuals, who undergo a special course of instruction for non-commissioned rank.

The remainder of the contingent, roughly 30,000 men, is hardly sufficient to maintain the various combatant or technical units on a peace footing.

The reduced number of the contingent is not sufficient to insure a larger establishment in the various army units, than that which is necessary for instruction under satisfactory conditions, *i.e.*, 1 platoon per company of infantry, cyclists or engineers; 2 troops per cavalry squadron; 4 guns per battery in the field and horse artillery, 1 or 2 guns per battery in the army artillery.

(c) Army Organization on a War Footing.

In principle each combatant unit on a peace footing is mobilized by increasing its effectives and its cadres, and by constituting at the same time a certain number of reserve and instructional units.

The number of units on a peace footing, as compared with those required on a war footing, works out approximately in the following proportions :—

Infantry	..	..	..1 to 3
Machine guns	..	..	..1 to 3
Cyclists	..	..	..1 to 2½
Infantry battery	..	..	..1 to 3
Divisional artillery	..	..	..1 to 4
Corps artillery	..	..	..1 to 3½
Cavalry	..	..	..1 to 1½
Army artillery	..	..	..1 to 4
Aviation	..	..	..1 to 2
Engineers	..	..	..1 to 4
Transport corps	..	..	..1 to 7

For the purposes of passing to a war footing, 8 classes have to be called up for the infantry, 4 classes for the cavalry, 10 classes for the artillery, 15 classes for technical troops, corps transport, medical services and general services.

Auxiliary troops (Territorials) are formed in principle from the classes after the 15th Class.

The effectives required on mobilization amount to 195,000 men, including cadres, so far as active troops with their services are concerned; also 100,000 would be required for reserve troops, 80,000 men for reinforcements, and 124,000 men for labour, giving a total of roughly 500,000.

The Belgian Army possesses, with certain exceptions, the stocks of material necessary for these troops.

The exceptions are as follows :—

Carbines, pistols, anti-aircraft material, certain types of ammunition, a great quantity of transport, gas masks and tanks.

In order to place existing material in a good state of repair, 800 million francs are necessary.

(d) *Value of the Army on a War Footing.*

The greatest efforts will have to be made with regard to the officer and non-commissioned officer cadres for the active troops in order to bring them to a war footing.

Practically the whole of the officers belonging to these troops are serving with units, and these would have to be made up from reserve officers, who have been through the late war.

In a short time the majority of non-commissioned officers required to complete units on mobilization, will be drawn from the special candidates enlisted with a view to becoming reserve second-lieutenants.

The cadre will be satisfactory when the special candidates, who are being instructed as non-commissioned officers of the 1927 class, are in a position to carry out their duties thoroughly.

The question of reserve troops is at present dealt with in each unit separately ; one officer and one non-commissioned officer in each unit is specially detailed for calling up the reserves of that unit. The officers who would be required are reserve officers who have been through the war, and reserve officers who were *miliciens* at the end of the war.

The cadre of *sous-officiers* and corporals will be found partially from volunteers, and also from the *miliciens* themselves. The value of this last class leaves much to be desired.

The cadre of the reserve troops cannot therefore be considered satisfactory. The whole question will have to be taken in hand, and the question of special training will have to be gone into.

(e) *Sous-officiers and Corporals.*

In order that suitable instruction may be insured, it is necessary that the lower grades of *sous-officiers* and of corporals should be permanent soldiers, either volunteers or re-engaged men.

The present organisation requires 8,093 *sous-officiers* and 5,082 corporals, a total of 13,175 volunteers or re-engaged men.

In order to meet the requirements of the technical services, 1,300 volunteers are also necessary.

The total number of volunteers and re-engaged men absolutely necessary amounts, therefore, to 14,475.

Ten years is looked on as the average service required of volunteers. It would be necessary, therefore, to recruit annually 1,450 volunteers, and to allow for wastage 1,600.

In 1925 there were only 694 ; in 1926, 522 ; in 1927, 565.

However, on the 30th November, 1927, the numbers of volunteers and re-engaged men increased to 12,125, not including musicians and military workmen.

(f) *Armaments.*

The present state of our armaments is bad. Our Mauser rifles of the year 1889 are of inferior quality.

The question of replacing them will have to be considered.

The carbine will have to be rendered serviceable.

The study to find a short model semi-automatic weapon for cavalry and for cyclists must be considered.

A model of a long range pistol has been adopted in theory for machine gunners and for the men of the infantry batteries, also for signallers, but the necessary credits have not been voted.

The machine gun now in use is absolutely lacking in efficiency.

The number of machine guns in the various machine gun units should be raised from 12 to 16. We have three types of machine guns.

The Colt should be got rid of as soon as possible.

The Hotchkiss will have to be thoroughly overhauled.

The heavy Maxim has been overhauled, but we have no spare parts and no reserve guns.

There are 3,000 heavy Maxim guns (German salvaged), but lacking gun-carriages and spares.

It has not yet been possible to equip our army with the light Maxim. The quantity of our infantry guns of "accompaniment" and their quality is not sufficient.

We have 49 tanks of an obsolete description, nothing has yet been done in this branch of warfare.

Our armoured cars are not suited for their work.

The horse wagons which we possess are old and in bad condition and lack of funds has prevented us from considering the question of new material.

Our artillery material 75 mm. is fairly well worn, but still in a sufficiently good state to render service.

Our 75 mm. (G. P.) long range gun is more modern, and compares favourably with that of other countries.

Our 105 mm. (G. P.) long range howitzer is excellent, but the range will have to be increased.

Our corps artillery cannot be considered good and a gun of 120 mm. is in contemplation, which will give good results.

We have per corps artillery regiments four *groupes*. Six will be necessary, of which three at least must have guns of 120 mm.

Our army artillery is lacking in guns of long range. We have in our possession a material which has been salvaged from the Germans and which by means of remodelling will enable us to possess absolutely modern guns, but the expenses of remodelling will be heavy.

Our anti-aircraft artillery is insufficient. The mechanization of corps artillery is incomplete and insufficient. We lack telephonic, optical, electrical and wireless material, also specialised transport.

There is also a deficiency with regard to the material of our railway troops and of our pontoon troops.

Roughly, two-thirds of the anti-gas masks of the latest model are deficient, also clothing specially prepared for protection against gas.

With regard to our medical services, practically no mobilization equipment exists.

(g) Belgium's Strategic Situation.

General Galet called special attention to the two main lines of operation, so far as the Great Powers on the eastern frontier are concerned, which would traverse Belgium, one line running from the north-east to the south-west, the other from east to west. The importance of the latter line of operation is augmented in proportion to the ever-increasing rôle played by Great Britain as a political factor in Europe.

So far as Switzerland is concerned an invader would not be able, owing to geographical conditions, to manoeuvre an army larger than the Swiss Army. Moreover, attack *via* Switzerland would expose the centre of gravity of the German army. With regard to Holland, this country also lies outside the main lines of operation ("placée excentriquement"), to say nothing of inundations which would prohibit the employment of more than one German army.

The passage across Belgium alone offers considerable advantages :—

The attack would be a direct one, the invader would be covering his own country, and it would allow of massed movements. The war of 1914 saw the passage of five German armies through Belgium.

General Galet then reviewed the effects of the Locarno Agreements; Belgium herself, being a guarantor and at the same time guaranteed, and consequently being compelled to provide an army in proportion to her new responsibilities.

He stated that one could be certain that the General Staffs of the neighbouring countries around Belgium, are determined that so far as possible, a future war should not take place in their own country.

To prevent war, and at the same time to maintain the line of resistance along the frontier, should constitute the ambition of the Belgian Military Organization.

At this point of the proceedings one of the civilian members of the Commission asked if it would not be advisable that the terms of the Franco-Belgian Military Agreement should be communicated to the Commission.

General Galet replied that that agreement was confidential, but that the question would be referred to the Government.

(h) Reasons for the Present State of Belgian Armaments.

General Galet stated that the sum required for the upkeep and repair of war material would have necessitated extra-ordinary budgets amounting to one hundred million francs; the extra-ordinary budgets, however, amounted in 1927 to nineteen million, and in 1926 to twenty-four million.

The extra-ordinary budget for 1928 will be sixty millions. This deficiency in extra-ordinary budgets accounted for the present condition of affairs in armaments.

The C. G. S. stated that to modernize the arms, equipment and transport of the army would necessitate an urgent expenditure of half a milliard francs. The sum required would necessitate a considerable lapse of time, and that in the meantime the state of the army would remain critical.

Another weakness with regard to the army is that at present no fortified regions exist on which to base its operations. A commission, it is true is dealing with this question, but much time and money would be required to realize its attainment. This fact also constituted a crisis.

To-day, should mobilization be ordered, Belgium would only be able to despatch 6 divisions to the frontier, instead of 12.

(i) Utilization of the periods of military service in the various arms.

General Galet stated that a period of ten months service allowed of only three months being devoted to field instruction and manœuvres.

Of the above, the initial period of 5 months is devoted to individual instruction, which cannot be cut down on account of the low state of education amongst the average infantry recruits. Two months have to be devoted to platoon instruction, which also cannot be decreased.

Divisions are unable to receive suitable instruction; for the period which can be devoted to exercises over unknown country is insufficient.

In order that satisfactory instruction may be insured, satisfactory weapons, rifle ranges and training grounds are necessary.

So far as the arms are concerned, evidence has already been given on this subject.

Shooting on the range is given to not more than two-thirds of the army, and in most garrisons the limited facilities for training grounds do not allow of more than one platoon being exercised at a time.

Good instructors are sadly deficient in the Belgian Army.

Amongst the Belgian officers in the infantry, two-thirds have risen from the ranks, and have not been through the Military School, nor have they benefited by the instruction given in the special platoons, which now form part of all units. It may be said that practically all company commanders in the infantry labour under the above disadvantages. The great majority of non-commissioned officers have not received a primary school education.

NOTES ON MILITARY REVIEWS.

“BULLETIN BELGE DES SCIENCES MILITAIRES.”

Published by Imprimerie Typographique de l'I.C.M., Brussels.

Price, 3 francs.

January, 1928.

1. *Operations of the Belgian Army, 1914-1918. (Continued.)*
Battle of the Yser. Day of the 26th October. 1914.

Operations between the Sea and Nieuport.

In order to follow these operations, the map at the end of last October number, as well as the map on page 10 of the present number, are useful; the former map shows the country generally between Dixmude and Nieuport, and the latter map the locations of French and Belgian divisions.

In pursuance of the order given on the evening of 25th October, by the G. O. C., 42nd French Division, only three battalions with a little artillery are left to defend the Yser Canal and the Nieuport Bridgehead.

On 26th October, General Grossetti took over command of all French troops between the sea and Dixmude. The list of French troops is given on page 2. General Grossetti was ordered to insure at all costs with or without the co-operation of the Belgian troops, the defence of the Nieuport-Dixmude front. General Grossetti's dispositions are given on page 3.

Operations between Nieuport and Dixmude.

A general retirement of both the 1st and 2nd Belgian divisions, from the line of the Noord-vaart to the main railway line Nieuport-Dixmude, giving rise to a rather critical situation on the line of the railways, is described on page 3-5. The French troops between the 1st and 4th Belgian divisions held the railway, from the right of the 1st Belgian Division southwards to where they joined on to the 4th Belgian Division near Stuyvekenskerke.

The 5th Belgian Division, on the right of the 4th Division, also held the railway line, which now became the main line of defence between Nieuport and Dixmude.

Operations in Front of Dixmude.

As the result of the enemy having crossed the Yser, Admiral Ronarch, commanding the French *Fusiliers Marins* decided to retire from the river bank and to hold the outer limits of Dixmude and at the same time relieve his worn out troops. He was reinforced during this operation by two Sengalese battalions and one battalion of the 5th Belgian Division.

Operations South of Dixmude.

The article deals with the joint action of the French and British troops, from Dixmude to the Passchendaele area, with a view to relieving the situation of the Belgian Army. The scope of these operations, which were conceived by General Foch, and a description of the attack on the British salient in the neighbourhood of Kruseid and the consequent lack of progress on the British front, are described on pages 9-11.

Decisions of the Belgian Higher Command.

In order to cope with the serious situation in which the Belgian Army found itself, with the prospect of the loss of the railway position Nieuport-Dixmude, the Higher Command decided upon lines of retreat for the divisions, should a general withdrawal of the Belgian Army become imperative. These orders were, however, not issued to the troops and the line of the railway was consolidated.

The chapter ends with accounts of the steps contemplated to flood both the country in rear of the Belgian Army, with a view to saving Dunkerque, in accordance with a preconceived plan of General Foch, and also the country on the line of the Nieuport-Dixmude railway. Neither of these schemes were put into execution.

2. *The Belgian effort on Lake Tanganyika during the War 1914-18.* By Captain Weber. (Continued). Of interest.

Part III of this work starts with an account of the action and development of aviation on the lake, under the general command of General Tombeur. The material in question consisted of hydroplanes handed over by the British Admiralty, which successfully knocked out the two German gunboats "Von Gotzen" and "Adjutant", and gave to the Belgians the mastery of the lake:

On pages 20-27 the activity of the Belgian flotilla on the lake is described at some length, special mention being made of Commander Simson's wise councils for the conduct of operations, in his capacity of inter-allied flotilla commander. A lack of agreement between Commander Simson and Colonel Moulaert, the commander of the lake operations, led to Commander Simson leaving Albertville with his flotilla, in order to co-operate with the Rhodesian troops further south. Page 23.

Part III ends with an account of the telegraph communications in the zone of operations as they existed in March, 1916, and of the great improvements attained both in telegraph and wireless communication by December, 1916. Pages 27-28.

Chapter V (pages 29-36) shows the use which was made of the mastery of the lake, resulting in the repair and exploitation of the Kigoma-Tabora railway. An appreciation of the general organization of the lake transportation services is given on pages 29-30, and a general review of the success of the operations in the Tanganyika province ends the narrative.

3. *Manœuvre in Retreat.* By Captain Dujardin. Of little interest.

This article is a treatise on the best methods of conducting rear-guard actions, which the author proves are rendered possible by superiority of fire on the part of the rearguard and facilitated by the employment of the most modern fire-arms.

Many examples are given from the Napoleonic Campaigns (page 38), showing how Napoleon exploited this method of retirement.

The author then passes to the Great War to prove how especially, in 1918 as also in 1914, the German Army made full use of their superiority in artillery and automatic weapons to cover the retirement of their armies. Lengthy extracts from the German regulations *Hinhalten des Gefechts*, which is defined by the author as meaning either combat of demonstration or combat of delay, are given as an interpretation of the rôle of rearguard action; the various arms best suited to insure the success of such retrograde movements are fully discussed, *i.e.*, infantry, cavalry, artillery and aviation.

4. *Tanks. Part II.* By Major Lievin (Continued). Of interest.

In this article the principal types of tank described are the Renault (French), the Whippet (British), the Saint Chamond (French), the Christie I (American), Christie II and the Peugeot (French).

The chapter is divided as follows :—

- (a) Speeds which are under modern conditions required of tanks in war.
- (b) General considerations with regard to mobility, especially with a view to obviating the long halts now necessary for overhaul. The mobility of tanks should equal that of the lorry.

The transport of light tanks on lorries or on trailers, which attained useful results during the war, is only an emergency method which should be given up.

The two solutions with regard to mobility now under consideration are :—

- (1) Tanks with dual means of propulsion, *i.e.*, interchangeable wheel or track according to the nature of the country.
- (2) Insuring that track machines are able to travel by road at the same average speed as machines on wheels.

The chapter is profusely illustrated with various tanks used by modern armies.

5. *Study of the problem of fire concentration. Part III.* (Continued). By Major E. Smedts.

Of interest only to the scientific branch of artillery.

A very technical and mathematical treatise on artillery fire.

6. *Carrying out the clauses of the Versailles Treaty regarding control.* By Paul Roques. Of interest.

The writer divides this note on the work of the Interallied Commission of Control into two parts. Part I reviews the work the Interallied Commission in Germany. Part II deals with the taking over of this work by the League of Nations from 1st January, 1927. Part I clearly sets forth the obstructions to effective control in Germany, which the writer attributes to the evil genius of Genera:

Von Seeckt. The difficulties of control work in connection with war material, factories and inspection are clearly explained.

Part II deals with the work under the League of Nations, and emphasizes the essential steps which should be taken to facilitate the work of control and investigation generally.

7. *Machine gun fire in the intervals between co-operating troops.—Measures of security.* By Lieut. Borzee. Of interest to machine gunners.

A highly technical article on machine gun fire in defence, explaining the so-called "Collard" theory of angles of security at varying ranges, for machine guns firing over the heads of infantry in advanced positions.

February, 1928.

I. *Operations of the Belgian Army, 1914-1918.* (Continued.)

The Yser Battle, 27th October, 1914.

A.—*Operations between the Sea and Dixmude.*

The map at the end of the chapter, and also the map in the October 1927 number, show the localities referred to.

So far as the French and Belgian troops in this sector of the front are concerned, very little of interest happened on the 27th October. The French troops who were east of the railway Nieupoort—Dixmude were withdrawn on to the line itself.

On the Belgian front in the same sector (between Pervyse and Stuyvekenskerke), the 4th Belgian Division conformed to the retirement of the French divisions on its left. At the same time, the 3rd and 6th Belgian Divisions were brought back into support during the night of the 27th/28th October.

The new disposition of these divisions is shown on page 94.

B.—*Operations to the south of Dixmude.*

In this sector the French 17th and 31st Infantry Divisions carried out a vigorous offensive on the morning of the 27th October, the objectives being Passchendaele-Roulers for the 17th Division, Westroosebeke-Staden for the 31st Division. In this attack the French appear to have lost heavily.

Further north General de Mitry was held up in his attack in the neighbourhood of Mangelaerts (south-west of Houthulst Forest).

So far as the British Army is concerned, south of Dixmude the only event of importance was the break up of the IV Army Corps, which at the time only included the 7th Division and 3rd Cavalry Division. The former joined the I Corps and the latter was transferred to the Cavalry Corps.

The chapter closes with the decisions taken by the Belgian Higher Command for operations on the 28th October, and with a brief account of the partial inundations carried out in the neighbourhood of Furnes by opening the lock gates in that portion of the Nieuport-Furnes Canal.

2. *The Offensive. Method with regard to the Disposition of one's Troops against an Adversary securely established on a well-organized Front and well supported.* By Colonel Hans. Of interest.

This article is compiled from extracts from Tome VII, Vol. I, of the French war history (" Les armées francaises dans la grande guerre"), containing the conclusions come to on matters of higher strategy, by Foch, Mangin, Fayolle, Petain and others.

The article deals first of all with the dispositions in the attack of divisions forming the first line, and subsequently with divisions in the second line of attack. Such matters as the advantages and disadvantages of limited or unlimited objectives in the attack are discussed. It would appear that the British Army is credited with a preference for the limited objective. Page 109.

The conclusions come to in this article bring out the truth of Napoleon's maxim that victory belongs to the army which manœuvres, and that whenever an army is occupying a prepared position, it is incumbent on its adversary to turn or envelop the position.

3. *Tanks. Part III.* By Major Lievin. (Continued). Of interest.

B.—*The power of crossing gaps, breaking down obstacles and of climbing slopes.*

This article, which is once more profusely illustrated with designs of British, Renault, Fiat and American tanks, is divided into three parts: Crossing gaps; Power of breaking down obstacles; Climbing powers.

Part I. Crossing gaps.—By this is meant the width of gap which the tank can cross at a bound; for a light tank this is put

down at $1\frac{1}{2}$ to 2 yards as a minimum. For medium tanks the width of gap which the tank should be able to cross is estimated at from 2 to 3 yards, whereas for a heavy tank a 4·3 yards gap is given as the minimum.

Reference is made on page 119 to the British effort at Cambrai in 1917, when 450 tanks were launched in the attack, and where gaps of over 4 yards had to be negotiated.

Allusion is made on page 119 to British tanks equipped with tank bridges for the purpose of crossing gaps up to 8 yards.

Part II. Power of breaking down obstacles. Page 122.—The tank does not depend on shock tactics to crush its obstacles, but on horizontal pressure, slow but continuous. This matter is discussed from a technical point of view on pages 122-124.

Part III. Climbing powers.—A war tank should negotiate a slope of 1/1, and this can be accomplished by the majority of tanks now in use. Page 124.

The vulnerability of tanks when in process of climbing a steep slope is discussed on page 125, as also the mechanical construction of the Renault Kegresse, with a view to obviating this defect.

The question of amphibious tanks, and the efforts in this direction made by the British Army in 1922 is discussed on page 127, also those of the American Army in the same direction on pages 128-129.

4. *Study of the problem of fire concentration.* By Major E. Smedts. (Continued).

A highly technical and mathematical study on artillery. Of interest to the technical branch only.

5. *Napoleon: his Life and Work. An appreciation of his career.* By Major Delvaux. Of historical interest only.
6. *The Russian Military Organization.* Of interest.

This article, taken partly from articles in the "Revue Militaire Francaise" and from the League of Nations Armaments Year Book, gives an exceedingly interesting account of the Russian Army of today, divided as it is into two parts—the permanent army, which forms the cadres and insures the protection of the frontiers, and the territorial army, of which the cadre only (1 in 10 of the total effectives) is permanent.

It appears from this article that the annual contingent of men liable to service amounts to between 950,000 and 1,000,000.

The permanent army numbers 562,000 men. This includes the Fleet.

The article is divided into five parts —

- A.—The superior directorate of the army.
- B.—Military obligations.
- C.—Recruiting.
- D.—Mobilization.
- E.—Composition of the peace time army.

Under A the following matters are dealt with :—

- (1) “The people’s high commissioner,” who is the head of a commission dealing with the organization, administration and supplies of all forces on land and sea.
- (2) “The military revolutionary soviet” which exercises the higher command with regard to the army, naval and air forces.
- (3) Organizations which come under the orders of the military revolutionary soviet.
- (4) The commander-in-chief.
- (5) The army staff.

A final appreciation of the Russian military forces from the “Revue Militaire Francaise” is given on page 177.

March, 1928.

1. *Operations of the Belgian Army, 1914-1918. The Battle of the Yser. Day of the 28th October 1914.*

French Troops.

In compliance with an order of General d’Urbal, 2 French infantry battalions and 8 field batteries, belonging to the force under General Grossetti, were placed under General de Mitry’s orders near Woesten, with orders to attack immediately in the direction of Zuydschoote.

The 38th French Infantry Division, a new division on this front, was detained on 28th October and despatched south to co-operate with the troops mentioned above.

Belgian troops.

The dispositions of the Belgian troops on 28th October were as follows :—

The 2nd Division were occupying the railway Nieuport-Dixmude, between the Furnes Canal on the north to Violon Farm on the south, a front of about 3 km. (*vide* sketch map on page 187).

The method by which the commander of the 2nd Division proposed to carry out the relief of his troops is given on pages 187-188.

The 1st Division held the railway from the point K 10 to the Reigersvliet on a 3 km. front (*vide* map on page 189).

The 4th Division occupied the railway between points K 6 and K 5 and were in liaison with the 5th Division.

The 5th Division occupied an east to west position astride the main railway line, joining the 4th Division on its left flank and the French troops on its right flank at point B 16 on the Yser (*vide* map on page 190).

The 3rd and 6th Belgian Divisions spent the 28th October in being reorganized.

The 1st Cavalry Division, assisted by the 2nd Cavalry Division, protected the bridge heads on the Loo-Furnes Canal, running parallel to and south-west of the Nieuport-Dixmude railway line (not shown in map).

Operations south of Dixmude.

The French troops under General de Mitry and under the commander of the 9th Army Corps made no progress in the allied attack, which had been planned for the 28th October. So far as the British troops were concerned the Germans made several attacks on front of the 2nd Division, which were beaten off. The day of the 28th may be said to have been uneventful.

2. The rôle of the Belgian Field Army and of the Belgian Fortresses in 1914. By Lieutenant-Colonel Duvivier and Captain Herbiet.

Of interest. The March number of the *Bulletin Belge* gives the preface to this work, which will be continued in subsequent numbers. It will form a highly interesting study of Belgian strategical problems, both during the war and also as a guide to the future policy

of defence. The authors are both experts in military history. The preface forms a strong denial of the account given at Berne before the society of officers on 26th January, 1927, by the Swiss Colonel Jenny, in which the latter belittled the Belgian military effort in the defence of the Liege and Antwerp fortresses and compared the Belgian defence of their fortresses unfavourably with the French effort at Verdun.

3. *Artillery fire in direct liaison with Infantry during Manœuvre.*
By Colonel Mozin.

Of interest. The writer deals with this subject in three chapters :—

(1) What type of fire should the artillery employ in the attack when co-operating with infantry.

(2) Supporting fire which has been studied before hand and that which is unexpected. How should the infantry word a request for artillery support, and the method by which the artillery should reply.

(3) What is the effect of concentrated artillery fire, which is opened suddenly or haphazardly.

Under each of these headings instances are given from the war in support of the writer's theories.

Chapters I and II are only dealt with in this article which is to be continued.

4. *The requirements of Military Organization in Peace Time in accordance with the new French Regulations.*

This article establishes the fact that the new French military peace organization has been drawn up with a view to fully assuring the triple rôle of instruction, of *couverture*, and of mobilizing the army on a war footing.

Counter projects which do not respond to the above requirements have been rejected.

The Government projects which have given satisfaction, especially on account of insuring an adequate period of military service, have received the prompt support of Parliament.

They are based on the principle of security first, term of service second.

5. *Deliberations of the Mixed Commission appointed with a view to proposing methods of reorganization which are considered necessary in the Belgian Army.*

These are extracts taken from the first six or seven sittings of *La Commission Mixte*. See Monthly Intelligence Summary, Vol. XII, No. 3, January, 1928, page 57.

6. *The Military Organization of Germany.*

This chapter starts with a short biography of the German War Minister, General Groener, taken from *Vorwaerts* of the 20th January, 1928.

The chapter then discusses the organization of the German Army :—

A.—Generalities.

- (i) The object of the army.
- (ii) Its characteristics.

B.—Recruiting.

- (i) Methods of recruiting the men.
- (ii) Methods of recruiting the officers.

C.—Organization.

- (i) Formations.
- (ii) Units.

D.—Establishments.

- (i) Command and administration of the army.
- (ii) The units.

E.—Instruction.

- (i) Instruction of the troops.
- (ii) Instruction of N. C. O's.
- (iii) Instruction of officers.
- (iv) Instruction of large formations.

F.—The military instruction of German youths.

APRIL 1928.

1. *Operations of the Belgian Army during the 1914-18 Campaign. (Continued). Battle of the Yser—Operations between the sea and Dixmude—Day of the 29th October, 1914.*

French troops.

In front of Nieuport and Dixmude, the enemy's offensive was limited to artillery fire only: between these two localities, their

infantry, however, carried out several attacks, of which the most important was directed against the French troops stationed between the 1st and 2nd Belgian Divisions, between k. 10 and k. 11 on the railway south of Ramscapelle (*vide* sketch map in previous chapters). These attacks were repulsed.

On the evening of 29th October three French battalions detrained at Furnes and were sent as reinforcements to General Groszetti.

Belgian troops.

2nd Division.—The night of 29th-30th October passed without incidents of any importance and the relief of regiments holding the railway position was effected.

1st Division.—On this front the enemy's bombardment of the railway position became intense and a few infantry skirmishes took place, the most important in the neighbourhood of Pervyse. These attacks were without any definite result.

On the night of 29th-30th October, the 3rd Belgian Division relieved the 1st Division.

On the front of the Belgian 3rd, 4th, 5th and 6th Divisions, no incident of importance took place during 29th October, and the necessary relief of units took place during the night.

The 1st and 2nd Cavalry Divisions performed the mission allotted to them the previous day, *i.e.*, the occupation of bridge-heads on the Loo Canal.

Operations south of Dixmude.

French troops.

On 29th October, the reinforced 42nd Infantry Division was grouped under General Humbert and formed into the 32nd Army Corps. The French troops operating on the Belgian Army front were formed into three groups as follows:—

The Northern group under General Humbert (38th, 42nd and 89th Infantry Divisions).

The Central group under General de Mitry (87th Infantry Division, 4th and 5th Cavalry Divisions).

The Southern Group under General Dubois (17th, 18th, 31st Infantry Divisions and 6th Cavalry Division).

Their respective missions were :—

Humbert group.—To maintain, in co-operation with the Belgian troops, the integrity of the front Nieuport—Dixmude, by attacking in the general direction of Clercken, Zarren, Thourout.

de Mitry group.—To attack in the direction of Mangelaere and Bulte Hoek (south-west and west of Houthulst Forest).

Dubois group.—To pursue the offensive in the direction of Staden and Roulers.

British troops.

At dawn on the 29th October the enemy launched a violent attack on Gheluvelt and occupied a portion of the British line. The British troops suffered heavy casualties, although the loss of ground was slight. The incident, however, was serious in view of the proposed attack by the enemy on Ypres on the following day.

The chapter ends with the decisions taken by the Belgian Higher Command for the operations of 30th October.

2. *Rôle of the Belgian Field Army and Fortresses in 1914.*

By Lieutenant-Colonel Duvivier and Major Herbiet.
(To be continued). Of interest.

(1) *The history of Belgian fortifications.*—This chapter starts with an interesting historical record of the reasons which led up to the system of fortifying Belgian territory, dealing especially with the periods of 1830, 1851 and 1859, and the creation of the fortified camp of Antwerp in 1906 (pages 295-304).

Part II deals with the state of the Belgian Army and of the fortresses at the outbreak of the war in 1914, and gives an interesting description of the fortresses of Liège, Namur and Antwerp at that date, and shows how the armament of these fortresses suffered from lack of long-range artillery, compared with that in possession of the enemy.

3. *Artillery fire in direct liaison with Infantry Manœuvre.*

By Colonel Mozin. (Continued from March number).
Of Interest.

This month's article deals with the following subjects (pages 315-323) :—

(a) How should infantry word their request for artillery support ?

- (b) How should the target be described ?
- (c) How should the duration of the artillery fire be determined ?
- (d) At what distance from the objective should the infantry be, when a request has been made for artillery support ?
- (e) How will artillery reply to infantry demands for support ?

Chapter III of this article deals with the question as to what faith can be placed in the efficiency of concentrations of artillery fire, which are opened without due preparation.

On page 328 the author gives his general conclusions.

4. *The Siting of Field Batteries.* By Lieut.-Colonel Thomas.

Of interest to the scientific branch of artillery only. This is another highly technical and mathematical article by the author of similar articles on the science of artillery, which have appeared in recent numbers of this journal.

5. *Tanks.* By Major Liévin. (Continued).

Part IV C. The Methods of Fire.—This part deals with the normal mission of tanks of *accompagnement*, which are to assist the advance of the infantry by working in co-operation. The writer states that the armament of such tanks should be relative to their tonnage, and should fulfil certain conditions :—

- (a) Be able to break down rapidly all resistance met with in open country.
- (b) Be capable of dealing with armoured cars and anti-tank weapons.
- (c) Be capable of being employed under all battle conditions against protected targets, as well as against targets which are merely masked.

These tanks, moreover, should carry a supply of ammunition sufficient to prevent the fighting units being harassed in bringing up ammunition during the fighting. This ammunition should include—

Armour piercing shells.

Explosive shells.

S. A. A. boxes.

Smoke bombs.

The author then gives certain characteristics of light tanks in use (the Renault and the Fiat), dealing especially with their armament.

Illustrations are given of the Renault tank gun with its shield, and the Saint Chamond tank armed with a 13-mm. anti-tank machine gun.

Part D.—Deals with the protection afforded to the tank crews and the interior portions of the machine, special reference being made to the German anti-tank 13-mm. machine gun mentioned above.

On page 352 the new Swiss anti-tank 20-mm. *Oerlikon* gun is discussed ; it is considered a good weapon. Other guns, in addition to the Swedish and Italian guns, are discussed on pages 353-358.

The other subjects mentioned are—

(a) Protection against gas.

(b) Optical instruments, including the stroboscope and periscope binoculars.

The article ends with certain observations on the inconveniences resulting from mechanical propulsion, chiefly due to noise and the number of men forming the tank crew.

6. *Napoleon I: His Life and Work.* By Major Delvaux.
(Continued from February number.)

Of historical interest only.

7. *Method of constructing the Swedish Topographical Model Map.* By Lieutenant Lambert.

This is a description of the Swedish method of giving instruction in map reading and the carrying out of tactical schemes on an indoor reproduction of the ground to be worked over, formed by sand models and other artificial methods of representing the topographical features in question.

This contains nothing new.

BULGARIA.

Strength and Organization.

At the end of May, 1927, when the Organ of Liquidation was finally dissolved, the total strength of the army was 29,792 officers and men, and 2,713 civilians. The latter are being gradually dismissed in order to bring the strength down to the 30,000 allotted by the Treaty of Neuilly. Of this strength 3,000 are frontier guards, and 6,800 gendarmerie, leaving approximately 20,000 for the army

Equipment.

The equipment is almost entirely German ; according to the Organ of Liquidation it is in very good order. There are probably sufficient arms and equipment to put into the field 100,000 men, which is about all that Bulgaria could mobilize on the outbreak of war. However, there are many indications pointing to the fact that Bulgaria is introducing into the country at regular intervals further munitions of all kind. If this continues she may, in the future, be in a position to equip her normal mobilized strength, which can be taken to be in the neighbourhood of 300,000 men.

Training.

The German training manuals have been taken almost verbatim for the use of the army. Most of the senior officers have had training in Germany and generally speaking the army is imbued with German ideas. Since the war nothing bigger than regimental exercises have taken place, and no foreign officers have been allowed to attend these.

CHINA.

THE SITUATION.

1. Civil War.

(a) Eastern Sector.

The expected Nationalist advance commenced on 10th April, when Chiang Kai-Shek launched his troops northwards from Suchow. The attack was made in three columns.

(i) *Right Column.*—Starting from Haichow, the eastern terminus of the Lunghai railway, this column advanced without opposition into Shantung, and on 28th April had succeeded in reaching the Tsingtao—Tsinanfu—railway, 75 miles east of Tsinanfu, where the railway and telegraph lines were cut.

(ii) *Centre Column.*—This consisted of the bulk of Chiang's forces, and moved northwards along the Pukow—Tientsin railway. Prominent in the Nationalist forces was Chang Fak-Wei, the Communist leader, who had hurriedly moved up to support Chiang. Serious opposition was encountered and heavy fighting took place, but the Nationalists succeeded in advancing. Considerable disorder occurred in Sun Chaun-Fang's armies, which withdrew northwards.

By 20th April the Nationalists were within 40 miles of Tsinan, the capital of Shantung. Sun's forces were supported from the rear to some extent by those of Chang Tsung Chang, but one of the latter's armies seceded to the Southerners.

By the end of the month the Nationalist advance had been brought to a standstill, leaving Tsinan still in Northern hands. Both sides were preparing for further hostilities after reorganizing their forces.

(iii) *Left Column.*—An advance from the Lunghai railway west of the Grand Canal was undertaken with small forces, which had little effect on the main advance.

(b) *Western Sector.*

With the object of preventing Feng co-operating with Chiang Kai-Shek, the Northerners attacked Feng's advanced troops on the Peking—Hankow railway early in April. This attack met with some success and Feng withdrew.

Shortly after, however, Feng moved north-eastwards from Kai-feng between the Lunghai railway and the Yellow River in the direction of Tsinan, with a force that appears to have consisted chiefly of cavalry. This advance met with rapid success and assisted Chiang's advance, in that Sun's withdrawal was thereby hastened. Feng's object was apparently to reach Tsinan before Chiang.

By the end of the month Feng's advance had been held up some distance south-west of Tsinan, and the Northern forces were reported again to be contemplating an attack against Feng along the Peking—Hankow railway.

(c) *North-Western Sector.*

Up to the end of the month there has been no serious conflict between the Northern forces and those of Yen Hsi-Shan. Large Northern forces are, however, still retained at Paoting and Chentingfu on the Peking—Hankow railway, ready to deal with any advance by Yen.

Thus the opening round has gone in favour of the Nationalists. The latter have not yet, however, come into serious contact with Chang Tso-Lin's own Manchurian troops, the bulk of whom are in the Paoting area, and who may be expected to put up a better resistance than those of Sun Chuan-Fang or Chang Tsung-Chang.

2. Split in the Kuomintang.

Nothing further has been heard this month of the report mentioned in the March Summary of the return to Hankow of Tang Sheng Chih.

The military leaders at Hankow agreed to the appointment of a nominee of Chiang Kai-Shek's to the chief political post of the provinces of Hupeh and Hunan. Actually, this official will be purely a liaison officer between Nanking and Hankow, for the military leaders at the latter state they will allow no interference from Nanking.

A concentration of the forces under the control of the Hankow régime was effected at Hankow ostensibly to support the anti-Northern offensive.

The only assistance rendered, however, was the despatch of a few of the worst Hankow troops northwards to help Feng, but nothing has been heard of them since they left Hankow.

No further fighting between the Hankow forces under Cheng Chien and the forces under Ho Chien has occurred, and it is reported that some form of agreement between them has been arrived at. Yangsen is also reported to have met the Hankow leaders in conference. It is probable that all these groups in the Hankow area are waiting to see the result of the present fighting between north and south before committing themselves to any definite line of action.

Li Chai-Sum, who, as reported in the March Summary, left Canton suddenly for Nanking, returned to Canton at the end of April. No assistance from Canton for the Nationalist advance, either financial or military, appears to have been forthcoming.

The desperate need of support felt by Chiang Kai-Shek is illustrated in the fact already mentioned that Chang Fak-Wei was in the forefront of the attack. Chang will be remembered as the extreme Communist who, having overrun Kwantung with his Communist army, staged the rising in Canton in December, 1927. He has since been occupying eastern Kwantung, whence he moved northwards to Chiang's assistance shortly before the advance began.

*4. Situation at various centres.**Hankow.*

Some friction has occurred during the month between the Chinese authorities and the French Concession officials. The

former accused the latter of harbouring Communists, and threatened to place a cordon round the Concession in order to cut off all outside communication. The threat has not yet been put into effect, and the situation has become less acute.

The French Admiral has proceeded to Hankow where the French Concession is defended by a machine gun company. A second company is being held in readiness at Shanghai to proceed to Hankow if required.

The rendition of the French Concession is now being demanded by the Chinese authorities, who state, however, that they wish to achieve this by negotiations and not by force.

No anti-British feeling has been reported.

Canton.

Canton has been quiet during the month. A Communist plot was discovered on 31st March. Martial law was declared and a number of arrests were made. Several executions took place. Since Li Chai-Sum's return from Nanking the situation has become easier.

Swatow.

Two attempts by Communists to seize Swatow were made during the month, but in each case the Communists were driven off.

The Upper Yangtze.

Bandits continue active on the Upper Yangtze and firing on British and other ships has been again reported during the month. The efforts of local Chinese authorities to suppress these pests have apparently had no success.

An attempt to work up an anti-British boycott at Chunking (400 miles above Ichang) early in the month met with no success.

During the month Wu Pei-Fu left this region and is reported to have retired from the Chinese stage to take up his residence permanently in a Tibetan monastery.

5. Japanese attitude towards events in China.

In order to protect Japanese interests in Shantung a force of 5,000 men was despatched from Japan and landed at Tsingtao on 26th April. (For further details of the despatch of this force see article under Japan in this Summary).

Formal protests against this action have been made by both Northern and Southern Chinese Governments.

Following the cutting of the Tsingtao—Tsinan railway by Nationalist forces, a force of 1,500 Japanese troops left Tsingtao on 29th April for Changtien—70 miles east of Tsinan—to repair the line and restore communication between Tsingtao and Tsinanfu. This illustrates the lack of hesitation on the part of the Japanese to use their troops in protection of their interests in China.

6. *Chinese piracy.*

Owing to indications that the activities of Chinese pirates were about to recommence, it has been decided to station armed British guards on certain British vessels sailing in the Hong Kong area.

7. *China arms embargo.*

A further step towards securing adherence to the terms of the China arms embargo has been made, by the agreement of all Lloyds' underwriters not to insure any consignments of arms or munitions destined for China.

EGYPT.

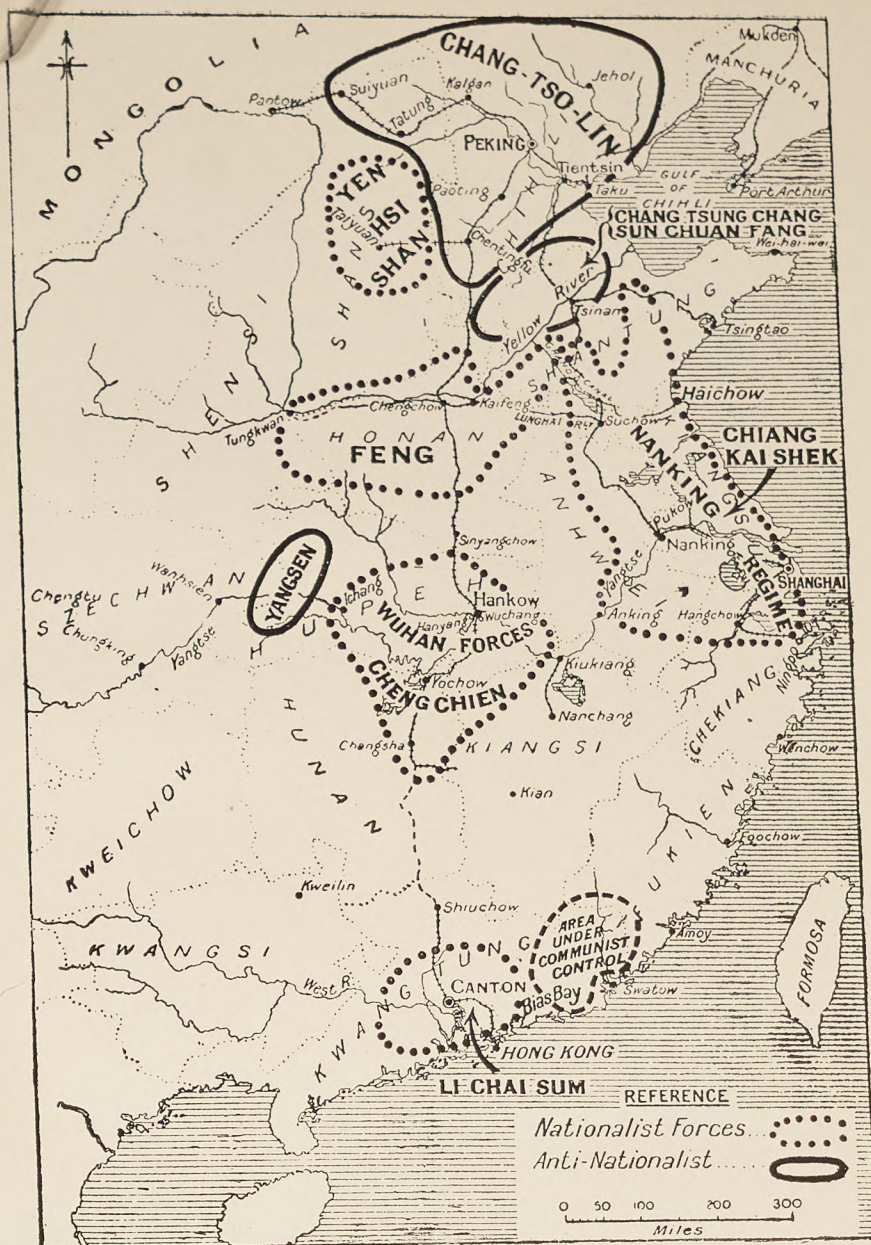
POLITICAL SITUATION.

On 30th March, Nahas Pasha replied to the *aide memoire* of 4th March in which His Majesty's Government expressed their disapproval of certain legislative measures proposed by the Egyptian Cabinet. In this reply he asserted that the interference of an outside authority was an unwarranted infringement of the rights of an independent nation, and he ignored the special position in which Great Britain stands in Egypt in virtue of the Declaration of February, 1922.

On 4th April, the text was published of His Majesty's Government's reply to the Egyptian Note. In this, His Majesty's Government refused to allow that Nahas Pasha's Note gave a correct exposition of the relations between the two countries, and reiterated their adherence to the Declaration of February, 1922, in which the independence of Egypt was declared, subject to four reservations.

These were—

- (1) The security of the communications of the British Empire in Egypt.
- (2) The defence of Egypt against foreign aggression or interference.



(3) The protection of foreign interests in Egypt, and the protection of minorities.

(4) The Sudan.

It had been hoped that progress towards a solution of these four points would be made by the negotiation of a new treaty, but on the breakdown of the negotiations with Sarwat Pasha such hopes were dispelled. Consequently the *status quo ante* still continued with the reserved points remaining reserved to the absolute discretion of the British Government.

The Egyptian Government withheld their reply to this communication, but towards the end of April the Cabinet, under pressure from the extremist members of the Wafd, appeared to be intent on testing British sincerity by proceeding with the passage of the Public Assemblies Bill. This Bill is one of the measures to which exception has been taken by His Majesty's Government on the ground that it would endanger the security of foreign nationals, for which they held themselves responsible under the Declaration of February, 1922.

In consequence, on 19th April a verbal warning was addressed to the Prime Minister by the High Commissioner, expressing in categorical terms the objections of His Majesty's Government to the Assemblies Bill. As the warning had no apparent effect, on the 29th April a written ultimatum was handed to the Premier, demanding the withdrawal of the Bill within 72 hours. Failing compliance, His Majesty's Government reserved the right to take such measures as it deemed necessary to meet the situation.

On 1st May, the Prime Minister handed his reply to the High Commissioner. This note reiterated the Egyptian Government's view that they could not recognize Great Britain's right to interfere in Egyptian legislation. In consideration, however, of their desire to reach an amicable understanding the Egyptian Government undertook to suspend consideration of the Assemblies Bill until the next Session.

His Majesty's Government, in a further Note, accepted his assurance of the friendly sentiments of the Egyptian Government and noted the postponement of the Bill, but stated that if the Bill was reintroduced measures would again have to be taken to prevent its enactment. In addition, His Majesty's Government asserted that they could enter into no discussion respecting the Declaration of February, 1922, which they would not permit to be either modified or disregarded.

CZECHOSLOVAKIA.**COLOUR SERVICE.**

At the end of 1927 the War Minister announced that the period of colour service could not be reduced from 18 months to 14 months until the requisite number of long service non-commissioned officers are available to train the army on the reduced service basis.

TRAINING.

In the interests of economy no grand manoeuvres took place in 1927, training culminating in inter-divisional exercises.

DISENFRANCHISEMENT OF THE ACTIVE ARMY AND GENDARMERIE.

A law to the above effect has recently been passed, despite strong disapproval. The Minister of National Defence has, however, expressed himself as well satisfied with the results to date. The law is believed to have been originally aimed against the anti-militarist activities of the Communists, who are numerically strong in the country. It is also capable of destroying any tendency to undemocratic Fascism among the officers.

RAILWAYS.

On 8th December, 1927, work was commenced on the new Moravian-Slovakian railway, which is to run from Veseli on the Morava (about 10 miles south-east of Brno) through Nove Mesto on the Vah. The object of the railway is purely strategical, in order to provide communication with Slovakia at a safe distance from the frontiers.

PRODUCTION OF NITRATES.

On 26th January, the Defence Minister, in a speech before the Defence Committee of the Senate, stated that until 1929 Czechoslovakian explosives factories will be forced to depend upon imports of nitrate from Chili to supply their needs. The reduction of nitrates, the Minister went on to say, depends upon the bigger problem of electric power, and plans for the production of the latter included the construction of dams in the valley of the Moldau at Stechovice, 15 miles south of Prague, and in the valley of the Vah (Waa). In the latter valley a hydro-electric power station will be completed in 1929, the surplus power from which will be employed to produce hydrogen, for the manufacture of nitrates. It has been ascertained that the surplus hydrogen produced at the great coking furnaces near Moravian

Ostrau (on the Silesian frontier) is not fully used up, and it has, therefore, been decided to erect two nitrate-producing factories, one at Marienberg near Moravian Ostrau, and the other at Semtin (60 miles east of Prague), where a large explosives factory is situated.

As soon as the Stechovice dam is finished it will be possible to erect there another nitrate factory, so that eventually there will be a total of four such factories in different parts of the Republic and these will be sufficient to meet its needs.

EGYPT.

ANGLO-EGYPTIAN NEGOTIATIONS.

After protracted negotiations and discussions extending over a period of many months, the draft of a new Anglo-Egyptian Treaty was drawn up towards the end of last year by His Majesty's Government in collaboration with the Egyptian Prime Minister, Sarwat Pasha. Sarwat then undertook the unpromising task of piloting this draft, to the terms of which he had personally agreed, through his own Parliament. An interval of laborious political manoeuvre followed in which the extremist or anti-treaty party always appeared to have rather the upper hand. It was, however, not until 5th March that Sarwat bowed before the opposition and informed the High Commissioner in Egypt that the Wafd and his Cabinet had finally rejected the proposed treaty.

Sarwat thereupon tendered his resignation to the King, who had no course but to accept it.

At this juncture His Majesty's Government presented a firm note to the Egyptian Government emphasising their adherence to the Declaration of February, 1922. At the same time the whole of the connected correspondence, together with the full text of the draft treaty, was published in the Press and elsewhere.

For a brief space exhibitions of hooliganism by gangs of irresponsible students took place in various centres in Egypt, but these were quickly suppressed, and the prevailing excitement died down.

Finally, on 16th March, Mustapha Nahas Pasha, the President of the Chamber and leader of the Wafd, was entrusted with the formation of a new coalition Cabinet which proved to comprise eight Wafd and two Liberal members.

FRANCE.

JANUARY 1928.

The Military Budget for 1928 (Metropolitan and Colonial Office). See Monthly Intelligence Summary, Vol. XI, No. 3, for July 1927, pages 93 and 94, and Monthly Intelligence Summary, Vol. XII, No. 2, for December 1927, page 39.

(a) General.

The Budget has now been passed by Parliament and promulgated. No important changes were made in the Government proposals, although some minor economies were effected.

The 1928 effectives approximate closely to those maintained in 1904, but in a report to the Senate it is stated that the expense of maintenance in gold francs is double, that the soldiers serving for 18 months as at present cost double the amount for instruction, cadre and armament, and that this state of affairs will be accentuated when service is reduced to one year.

(b) Expenditure.

The following estimates were approved :—

Ministry of War	..	..	6,030,916,970 francs.
Rhine Army	..	..	511,627,160 „
Colonial Military Budget	..	..	395,259,130 „
Total	..	..	<u>6,937,803,260 „</u>

At the present rate of exchange this is the equivalent of £55,868,000.

(c) Establishments.

Metropolitan Budget (troops stationed in Europe, North Africa, Syria and China) :—

Officers	..	..	28,630
French other ranks	..	..	369,571
Foreign Legion	..	..	16,500
North African other ranks	..	..	103,532
Colonial natives	..	..	50,317

Of the other ranks 94,800 Europeans, 48,870 North Africans and 16,044 Colonial natives are long service regular soldiers.

Colonial Budget (troops stationed in other colonies) :—

Officers	..	..	1,539
European other ranks	..	..	13,014
Colonial natives	..	..	37,114
Grand total Regular Army			620,217 all ranks.

The following categories are not included in the above totals :—

North African Irregulars 12,797

French *Gendarmerie* and *Garde*

Republicaine—

Officers	..	..	895
Other ranks	..	..	32,136
Syrian Legion (paid for by Syria)	..		6,000 approxi- mately.

Agents militaires.

Civil employees.

(d) *Points of interest in the Budget.*

(i) Morocco.

The army in Morocco has been reduced by 3,000 regular soldiers, but three new irregular units (Goums) are being constituted.

The forces in Morocco are being organized in four military regions, with headquarters at Fez, Meknes, Taza and Marrakech, with an independent command at Casablanca. The first three will be divisional headquarters and the others mixed brigades.

(ii) The number of candidates for the Staff College has fallen off by 25 per cent. in 1927 compared with 1926, and it has been found necessary to accord special allowances to students.

A similar state of affairs exists at St. Cyr and the Ecole Polytechnique, the Sandhurst and Woolwich of France.

(iii) The contract for the French Military Mission in Brazil has been renewed. Appropriations are made for military attaches in Greece, Poland, Czecho-Slovakia, in case of the abolition of the existing military missions in these countries.

(iv) Of the 15,000 "Agents Militaries" required under the re-organization scheme, only 2,500 had been recruited by 28th November, with 1,500 waiting candidates.

(v) Special efforts are being made to encourage recruiting for the long service cadre in Algeria and Tunisia, and reservists will be trained for the first time in these colonies in 1928.

(vi) In 1928, 200,000 reservists of the 1922 Class and certain officers, non-commissioned officers and specialists of other classes, are to be called up for 21 days' refresher training, instead of the 25 days done by reservists in 1927. Owing to the unfortunate incidents in 1927, steps are being taken to attach sufficient regular officers and non-commissioned officers to the reservists for training, and arrangements are being made to see that the time of the reservists is better spent and that a higher standard of comfort obtains in the training camps.

(vii) By 31st December, 1927, 58 mobilization centres were actually working ; 57 further centres were formed on 1st January and 45 more centres are to be constituted by 1st August, 1928.

Army Reorganisation.

The Recruiting Law has passed the Chamber and now goes before the Senate. After some argument, the Government accepted a clause making one year's conscript service operative for the contingent called up in November, 1929. The date for the introduction of one year's service may, however, be put back if the Government think it essential.

The Artillery School.

A notification in the *Bulletin Official* of 31st December 1927, announces the amalgamation of the Artillery School at Fontainebleau and the Motor and Searchlight School at the same place. The whole will be known as *L'Ecole d'application d'Artillerie*.

Infantry Officers Promoted from the Ranks.

A decree of 15th November, 1927, notifies that in future the course at the Infantry School, St. Maixent (school for non-commissioned officer candidates for infantry and tanks), will last two years instead of one. In future, candidates will have to have at least one year's service in the rank of serjeant before admission ; in the past candidates were required to have spent at least two years in this rank. It is hoped by this measure to meet the shortage of officer candidates and to improve the standard of those trained at St. Maixent considerably.

The course is now of the same duration as at St. Cyr.

Communist Activities in the Army.

Editors of various Communist papers have again been sentenced for publishing articles inciting the armed forces to mutiny.

Prohibition in the French Army.

Considerable indignation has been aroused amongst wine-growing interests in France by an order of the General Officer Commanding 5th Army Corps, forbidding the sale of white wine to soldiers in the command.

FRANCE.

FEBRUARY 1928.

Army Re-organization.

(a) Disbandment of infantry divisions.

Amendment to Monthly Intelligence Summary, Vol. 12, No. 1, November, 1927, page 13—

The 31st Division (Montpellier) has not been disbanded.

(b) Progress of legislation.

The law relative to the cadres and effectives of the army, which supplements the law for the general organization of the army and the recruiting law, has now been passed by the French Chamber. The recruiting law has passed the Senate.

(c) Pre-military training establishment (preparation militaire).

In consequence of the re-organization, the establishment of non-commissioned officer instructors for the training of youths prior to their military service has been under discussion.

A provisional establishment, until the final passing of the Cadre and Effectives Bill, has now been issued, allotting the following number of non-commissioned officers for such training:—

For physical training	338
For general training—	
Infantry	200
Tanks	5
Artillery	36
Cavalry	11
Engineers	8
Total	598

These non-commissioned officers will be borne by units in excess of establishment. They will be attached to corps districts and to physical instruction centres in departments.

(d) *Non-commissioned officers' statute.*

Frequent mention has been made of the difficulties experienced in obtaining sufficient long-service non-commissioned officers for the French Army, and the large number of additional regular non-commissioned officers required under the re-organization scheme.

On 23rd December, the Chamber passed a law modifying and improving the status of non-commissioned officers in the French Army. The law applies to regular non-commissioned officers of the Metropolitan and Colonial Army and to the *Gendarmerie*.

This non-commissioned officers' charter was passed by the Chamber without discussion; it has not yet been considered by the Senate. It appears to be popular with the army.

This law forms part of the scheme for encouraging recruiting for the professional cadre of the army. In brief, it provides for the formation of a corps of regular non-commissioned officers with over 4 years' service, consisting of :—

Sergents.

Sergents-chefs.

Adjudants.

Adjudants-chefs.

With definite promotion rules, eligibility to pension, and post-service employment.

Non-commissioned officers will be compulsorily retired, with pension, at the following ages :—

<i>Sergents</i>	..	..	36
<i>Sergents-chefs</i>	..	..	39
<i>Adjudants</i>	..	..	42
<i>Adjudant-chefs</i>	..	..	45

Certain categories may be retained up to 50 in the case of *sergents* and *sergent-chefs*, and 55 in the case of *Adjudants* and *Adjudants, chefs*. Non-commissioned officers retired on pension belong legally to their old class in the reserve.

(e) *Recruiting of Regular non-commissioned officers.*

			1926.	1927.
Engagements	..	..	5,712	13,000
Re-engagements	..	..	4,000	12,000
Totals	..	..	9,712	25,000

It is stated that the increase in 1927 is due to improvement in conditions of service and not to the condition of the labour market in France. It is anticipated that the "non-commissioned officers character" referred to above will still further improve recruiting in 1928.

The Law for the General Organization of the Nation in the Time of War.

See Military Intelligence Summary, Vol. 10, No. 4, February, 1927, page 147.

This law has now been passed by the Senate, but 75 per cent. of the articles have been considerably amended during the discussion in the Upper House, and the law will now have to be reconsidered by the Chamber. It is doubtful if any further progress can be made before the French elections in April.

Training of the French Army (preliminary training and reserve officers).

The following extract is from a speech by M. Painlevé, the Minister for War, at a demonstration by the National Federation of Societies of *Education physique et de preparation au service militaire de France et des Colonies* :—

It is necessary that the year spent with the colours by a man should in future be devoted entirely to his training as a soldier. It is desirable that the man should join his regiment, therefore, having already received a suitable gymnastic, sporting and preliminary military training.

In addition, with short service, it is essential that reserve cadres should continue their training. The present situation is satisfactory. There are now 40,000 officers in France who have registered to undergo courses for reserve officers. Of these 16,000 are in the Paris district. The number who take a great deal of trouble and follow the course has doubled during the last few months. It has been necessary to double the teaching staff of regular officers to cope with the rapid increase in numbers.

FRANCE.

MARCH 1928.

Army re- rganisation.

1. *The progress of the reforms.*

The dissolution of the French Parliament and the consequent halt in Parliamentary discussions on army reform, gives an opportunity to review the progress made since the summary published in Monthly Intelligence Summary, Vol. X, No. 4, February, 1927, page 147.

In addition to the main Law on the General Organization of the Army, the Recruiting Law, the Law of Cadres and Effectives and the N.C.Os. Charter have now passed through both Chambers. Further legislation will be necessary to settle certain administrative problems.

The essential changes in organization and establishments have been carried out for some months.

The age for military service is being gradually raised from 20 to 21.

The period of conscript service will be reduced to one year for the contingent called up in November, 1929, provided the necessary conditions as to the enlistment of the supplementary regular personnel have been fulfilled.

2. *Peace organization.*(a) *Designations.*

The French Army remains divided into two categories :—
Metropolitan units, which are either white or North African.
Colonial units, which are either white or colonial native.

For budgetary purposes there is a different division :—

All units (whether Metropolitan or Colonial) stationed in France, Rhineland, Syria, North Africa and China, are paid for by the Metropolitan Budget.

All units (whether Metropolitan or Colonial) stationed in the other Colonies, are paid for by the Colonial Budget.

The above designations are apt to be confusing, and for strategic questions the French Army is best considered under the following headings :—

Forces du Territoire (French units stationed in Europe).

Force Mobile (Colonial Expeditionary Force stationed in Europe).

Forces d'outre-mer (overseas garrisons).

(b) *Forces to be maintained in France and Rhineland in peace.*

Twenty-one corps headquarters (20 corps regions and the colonial corps).

Twenty-six infantry divisions, comprising :—

<i>Forces du Territoire.</i> One division is raised in each corps region.	6 reinforced infantry divisions, each of 9 battalions (for eastern frontier corps regions). Units in these divisions are on a higher establishment.
	2 Alpine infantry divisions, each of 12 battalions (for the Italian frontier).
	12 normal infantry divisions, each of 9 battalions (stationed in the interior). One company per battalion or one battalion per regiment are cadre units in peace.
<i>Force Mobile.</i> Available for overseas expeditions.	2 North African infantry divisions, each of 12 battalions.
	2 mixed colonial native divisions, each of 12 battalions.
	1 Indo-Chinese Malgache <i>Groupement</i> (equivalent to a division) of 12 battalions.
	1 white colonial depot division of 9 battalions.

Twelve-battalion infantry divisions are organized in two infantry brigades per division.

5 cavalry divisions. The number of cavalry divisions may be increased by decree. No definite organization for a cavalry division is laid down in the laws, as cavalry organization is in a state of flux. Each cavalry division will have an infantry battalion (*Battalion Allege*) transported on carriers, formed of cavalry personnel.

3 air divisions. The maximum number of army air squadrons is not laid down in the laws. The French Government are thus able to increase the strength of the air arm by decree,

as personnel and material become available. The original bill envisaged 136 squadrons in place of the existing 132.

Units of the General Reserve, which in war are allotted by G. H. Q. to formations as required. These comprise tank regiments, the mass of heavy and medium artillery, and a proportion of *Portée* field artillery regiments. Also machine-gun battalions, which are formed on mobilization.

Garrisons of the following fortified regions :—

Nice.
Grenoble.
Belfort.
Strasbourg.
Metz-Verdun.

Each fortified region is allotted in peace one foot artillery regiment ; some 30 foot batteries will be maintained in peace.

(c) *Overseas Garrisons.*

(i) *North Africa.*—A large proportion of the overseas army is stationed in North Africa. The forces in North Africa are organized in divisions and mixed brigades, but these formations correspond more to our military districts in India than to war formations. They are to be located as follows :—

Algeria	..	3 infantry divisions.
Tunisia	..	1 infantry division.
Morocco	..	3 infantry divisions (1 formed of Colonial units) and 2 mixed brigades.

These formations will include :—

31 infantry regiments (approximately 93 battalions).

4 artillery regiments (with 16 *groupes*).

(ii) *Other Colonies.*—Considerable garrisons are maintained in—

Indo-China 26 infantry battalions.

West and Equatorial Africa.. Equivalent of 20 infantry battalions.

Syria 14 “Regular” and 7 Syrian infantry battalions.

Madagascar 10 infantry battalions.

The figures given are the existing garrisons.

3. *Peace establishments.*

French Regular Army.—

Regular officers	..	..	28,800
Long service white other ranks	..	..	106,013
White conscripts	..	..	239,994*
Foreign Legion	..	..	16,000
Long service North African other ranks	..	..	64,479
Conscript North African other ranks	..	..	29,699
Long service Colonial native other ranks	..	..	49,244
Conscript Colonial native other ranks	..	..	34,340
Total	..	..	568,569

Thus of a total establishment of under 570,000, 28,800 officers and 235,000 other ranks are regular long service personnel.

Semi-military personnel.—

<i>Gendarmerie</i> and <i>Garde Republicaine</i>	..	..	45,000
<i>Agents Militaires</i>	..	..	15,000
Army civilian employees	..	..	30,000

Irregulars.—

North African irregulars (paid for by the Metropolitan Budget) (present establishment)	..	..	12,797
Syrian levies (paid for by Syria) (present strength)	..	..	6,000

4. *Peace distribution.*

The peace distribution of regular other ranks of the French Army will be as follows :—

France—

<i>Forces du Territoire</i>	..	..	276,937
<i>Force Mobile</i>	..	..	70,637
			347,574
Overseas	..	..	192,195
Total	..	..	539,769

Of the 106,000 white French long service other ranks, there will be stationed in France (*Forces du territoire* and *Force Mobile*)—

56,248 in combatant units.

11,931 in services and departments.

* The annual class may actually be as strong as 250,000. In the 5 years from 1935 to 1941 the annual class will fall far below this figure, owing to restricted births and the high infant mortality in the war years. In 1937/38 the actual available contingent will only be 112,000. By gradually again lowering the age for military service during the lean years, the French hope to maintain the strength of the white annual contingent at from 180,000 to 200,000.

Reorganization of the Frontier Defences

See Military Intelligence Summary, Vol. XI, No. 6, October, 1927, page 218.

1. *Creation of technical inspectorates of fortification works.*

(a) The Commission for the organization of frontier defences has reported that their plans are sufficiently advanced for work to be begun.

(b) For the current year work will be limited to the XX and VI Corps regions, that is, on the front, Selestat—Strasbourg—Wissembourg—Thionville—Mezieres—Rocroi.

No work is at present to be undertaken in the VII region (Belfort area), but a similar organization is to be set up there as soon as work is to be begun.

(c) The task of preparation and execution of the fortifications is too great for the existing Engineer personnel of the regions involved. Hence the *Journal Officiel* of 9th February, 1928, contains a Presidential decree authorizing—

(i) The appointment of a technical inspectorate and 2 directorates of fortification works.

(ii) Additional pay for the Engineer officers and non-commissioned officers specially employed.

(d) The technical inspectorate is responsible for the co-ordination of all work. The 2 directorates formed will be established at Metz and Strasbourg. It is noteworthy that one of the reasons stated for the issue of additional pay to the officers employed is that work is to be continuous, by night and on Sundays; the continuous pouring of concrete is specially mentioned in the preamble to the decree.

2. *Creation of a service of fortification material.*

The *Bulletin Officiel* of 11th February contains a decree forming temporarily a *Service des matériels de la fortification*, to work under the *Section Technique du Genie* and the 4th Directorate of the Ministry of War.

This organization will deal with the study, manufacture and ordering of engineer material for the fortifications.

Shortage of Officers.

See Military Intelligence Summary, Vol. XI, No. 1, May, 1927, page 9.

Ecole Polytechnique.

In a report, dated 5th March, 1928, by the Minister of War to the President of the Republic, it is stated that the measures so far taken, increase of pay and allowances, and the extension of the age limit for entry, have failed to provide the necessary number of candidates from the *Ecole Polytechnique* for service under the Government, *viz.*, for the Artillery, Engineers and Civil Engineering Departments. Students from the *Polytechnique* still prefer to enter private industry.

A Decree was issued on the 5th March, 1928, with the object of increasing the number of candidates for Government Service, admitting an additional number of students to the school annually in order to make up the numbers required. Students thus specially admitted will be required to sign a contract to serve the Government for six years. The number of special entries will be fixed each year according to requirements.

General Election.

The French Parliament adjourned on 17th March.

Elections for the Chamber will be held on 22nd April (first ballot) and 29th April (second ballot).

Parliament will reassemble on 1st June.

Proposed Trans-Saharan Railway.

1. The French Government recently obtained the consent of the Chamber to a law giving authority for the setting up of a commission for the study of the construction of a railway line uniting French North and West Africa.

2. The political and military value of such a line is admitted. Its economic value, however, is still uncertain. The commission is to study the question of the Trans-Saharan railway under the following headings :—

- (a) *Technical.*—The location of such a railway line, its transportation capacity, method of traction (steam turbines or Diesel engines are mentioned in the preamble), water supply, measures to be taken for the security of the line, etc.

- (b) *Economic*.—The possibility of the development of the areas served, and a forecast of the traffic.
- (c) *Administrative and Financial*.—A forecast of the possible financial return of the railway, and recommendations as regards its construction and exploitation.

3. The preamble to the bill admits the difficulty of the financial aspect of the construction of the line. It is however suggested that deliveries in kind, obtained under the Dawes Scheme by France, may assist in the solution of the problem. It is also pointed out among the engineering problems, that if the line is to be built from the Algerian end only, it will take considerably longer than if construction can also be pushed forward from the Niger, with a base on some point on the Atlantic coast.

4. The expenses of the commission are estimated at 11,500,000 francs (about £92,000). This amount is to be provided by the Governments of France, Algeria, French West Africa, Morocco, Tunisia, and by the French Railway Companies interested in the construction of the line. The expenditure is to be divided between the years 1928 and 1929. It is anticipated that the commission will complete its studies by the end of 1929.

FRANCE.

April 1928.

Army reorganization.

In continuation of Military Intelligence Summary, Vol. XII, No. 5, March, 1928, page 176.

1. *Periods of Service.*

The period of conscript service for white personnel will be :—

With the colours 1 year.

En disponibilité (*e.g.*, liable to recall without the order for mobilization having

been given) 3 years.

1st Reserve 16 years.

2nd Reserve 8 years.

Total military liability .. 28 years.

The period of conscript service varies slightly in the different colonies, but the average is 3 years with the colours and 12 with the reserve, except Algeria, where conscript colour service is for 2 years only.

Officers passing through St. Cyr and the Medical School, and any candidates from the Ecole Polytechnique admitted above the normal age limit, are bound to serve 6 years as regular officers in the army.

2. *The training of the Army.*

(a) *General.*

One of the main underlying reasons for the reforms is a desire to raise the general standard of training of other ranks in the French Army, which has certainly deteriorated since the war.

In the past few years a great deal of the conscripts' time has been spent on regimental and garrison employ ; the time devoted to field training has been very short, and the strength of units insufficient to give useful results.

The increase in long service white personnel, the enlistment of additional *Gardes Republicaines* for guard work and police duties, of *agents militaires* to act as clerks and administrative personnel, and of civil employees to relieve serving soldiers from various domestic and menial duties, should enable the long service non-commissioned officer to be freed for his duties as an instructor, and the conscript to be made available for real training.

(b) *Pre-military Training.*

Considerable attention is being paid in France to pre-military training (*preparation militaire*), e.g., the training of youths before they join the colours.

A special law dealing with this subject is to be laid before Parliament, in amplification of the reorganization scheme.

This pre-military training is carried out by the Federation of Societies for the *Education physique et de preparation au service militaire de France et des Colonies*. Some 600 long service non-commissioned officers are seconded to carry out such instruction, which includes gymnastic, sporting and elementary military training.

At certain higher educational establishments, courses of higher pre-military training (*preparation militaire superieure*) are held. Successful students can obtain a *brevet de preparation superieure militaire*.

(c) *Regular officers.*

There is no change in the appointment of regular officers, *i.e.*, from the Military Schools and by the promotion of selected non-commissioned officers.

All officers in future will pass through two stages before joining units for duty :—

Preliminary training at the *Ecoles de Formation*, *e.g.*, St. Cyr, the Ecole Polytechnique, or the schools for non-commissioned officer candidates for regular commissions.

Further training at the *Ecole d'Application* of each arm, or sub-division of each arm.

As a consequence, an *Ecole d'Application* is being formed for the infantry. In future, commissions in all arms will be given to candidates from either St. Cyr or the Ecole Polytechnique, and there will be no specialization at these schools.

Education (*Perfectionnement*) during an officer's service will be continued by the *Cours Practiques de tir*, of which at present four are in existence, for infantry, artillery, A. A. defence, and aerial bombardment. In addition there are to be specialist schools, of which the following are enumerated in the laws :—

Signal School.

Motor and Searchlight School.

School for Aviation Mechanics.

Mountain Warfare School.

Physical Training School.

Three schools for special North African services.

Higher military education is ensured by—

The Staff College.

Centre des hautes études militaires.

Centre d'études tactiques d'artillerie.

Ecole superieure technique.

Ecole superieure de l'intendance.

In order to stimulate the technical education of officers, the War Ministry can issue *brevets techniques* and *brevets supérieures techniques* to those specially qualified. These correspond to some degree to the *brevets* obtained by Staff College graduates in France, and the holders will be entitled to certain additional allowances.

(d) *Reserve officers (officiers de complément).*

It is intended that Reserve officers should be trained at the *Ecoles d'application* of their arm (*see below*), but for a shorter period than regular officers.

Students at higher educational establishments are given a military training which prepares them for the rank of Reserve 2nd Lieutenant. Those who successfully pass an examination are appointed Reserve 2nd Lieutenant on joining the Colours. They spend a period at the *Ecole d'application* of their arm (normally six months) and complete their year's service as an officer of a unit.

In addition, holders of the *brevet de preparation militaire supérieure* are posted on joining to training platoons for Reserve officer candidates, which are formed in various garrisons. After 5 months, successful candidates are appointed Reserve 2nd Lieutenants, and complete their period of compulsory service in this rank. Reserve officers are to be called out for periods of training up to a maximum of 4 months during their liability to service. In addition, *Ecoles de perfectionnement* are to be formed in each region, at which Reserve officers are trained at times fixed in consultation with the associations of Reserve officers. The Minister for War stated that 16,000 Reserve officers in Paris had registered to attend voluntary courses.

In addition to compulsory periods of training, Reserve officers may serve for 15 days with pay, in any year in which they are not called up for training. Flying personnel may carry out voluntary training periods of 30 days each.

(e) *Long service non-commissioned officers.*

It is hoped to obtain, as heretofore, a large number of the long-service non-commissioned officers from boys trained at the Preparatory Military Schools, where sons of non-commissioned officers are educated up to the age of 18, and then engage for 5 years with the colours.

Instruction in the Army is carried out in non-commissioned officers training platoons in units. Specialist training to non-commissioned

officers is given at the *Ecole d'application* of the arm. The law for the general organization of the Army permits the creation of training or refresher centres for long-service non-commissioned officers.

(f) *Reserve non-commissioned officers.*

With 1 year's service, considerable difficulty is anticipated in the proper training of non-commissioned officers for the Reserve. Training is to be carried out in unit training platoons. Promotion to corporal may be made after 5 months' service in the ranks ; holders of the *brevet de preparation militaire* may be appointed senior corporals direct after the same period. Promotion to serjeant may be made at the end of 1 year's service. Training centres for Reserve non-commissioned officers may be created.

(g) *The conscripts of the Annual Contingent.*

The Laws contain stringent provisions to prevent conscripts being taken away from their units for employ. They are to remain with their units throughout their colour service, except when detached for special technical training or specialist work.

The system envisages the following organization in the infantry in the Interior :—

Training units (*Units d'instruction*), in which conscripts serve for their first 6 months.

Trained units (*Unités de manœuvre*), in which conscripts serve for the last 6 months.

Units in cadre.

This system can be adopted either within the battalion or the regiment.

In the first case, the battalion would comprise 1 recruit company, 1 trained company and 1 company in cadre. At each half-yearly incorporation of conscripts, the rôles of the companies would change. The objections to this method are that for the training of larger units, composite battalions would have to be formed by amalgamating companies of trained men from all the other battalions in the regiment. No active battalion would ever be able to carry out training with all its companies at the same time. In addition, regiments in the frontier regions and in occupied territory have no units in cadre ; thus all companies in a frontier regiment will have a proportion of recruits

and no unit will be absolutely ready to take the field, although in the most exposed position.

In the second case the cadre battalion system has more advantages, as it enables training to be carried out by integral battalions, and also one battalion in each regiment is ready to take the field at once. This system makes the garrisoning of occupied territory easier, as only battalions of trained men need be stationed on the Rhine.

It has not yet been definitely decided which system is to be adopted.

(h) *Reserve training.*

Each reservist is to carry out training as follows :—

<i>En Disponibilité</i>	..	..	1 training of 3 weeks.
1st Reserve	..	..	2 trainings, 1 of 3 weeks and 1 of 2 or 3 weeks.
2nd	..	..	1 training of 7 days.

Maximum Reserve training—63 days.

All the Reservists of an annual class, apart from certain specialists will be called up for Reserve training together. Reservists will be trained with the same unit with which they carried out their colour service, and Reservists who were trained in the same company, &c., will be kept together during Reserve training.

Reserve training is in principle to be carried out during manoeuvres, and, if possible, in higher formations constituted as on mobilization.

3. *Mobilization and expansion for war.*

(a) *General.*

The reforms aim at providing :—

- (i) An adequate covering force in the frontier regions in peace.
- (ii) The rapid expansion of the active army on mobilization, to provide a screen behind which the nation in arms can mobilize in security.

(b) *The Covering Force (La Couverture).*

Under the Treaty of Versailles, France can maintain an army of occupation in the Rhineland until 1935. The present strength of the Army of Occupation is 4 infantry and 1 cavalry divisions.

As stated in M. I. S., Vol. XII, No. 5, March, 1928, page 147, in principle one white infantry division is raised and stationed in peace in each corps region, and the total of 20 white infantry divisions cannot be exceeded.

In order to maintain the covering force, the laws provide that certain corps regions may in peace have their divisions withdrawn and stationed in the Rhineland or the frontier corps regions. The so-called *regions vides* will be those in the west of France.

For the present, 4 infantry divisions will thus be stationed outside their territorial regions, and allotted to the Rhine army. After the evacuation of the Rhineland, the 3 corps regions on the German frontier (VII Besancon, XX Nancy and VI Metz) will each be strengthened by a division on the higher establishment (*divisions renforcés*), drawn from the interior. In consequence the X Rennes and XI Nantes will be *Regions vides*; the XVIII Region Bordeaux will be garrisoned in peace by the Colonial Depôt Division.

As a temporary measure, the Rhineland divisions are grouped in two *Corps d'Armée de Marche*.

The covering force on the Italian frontier is assured by two Alpine divisions, both on a higher establishment.

(c) *Mobilization machinery in peace.*

Active units of the standing army (*Forces Permanentes*) are freed under the reforms of all duties connected with mobilization. These are carried out by 450 mobilization centres, staffed mainly by *agents militaires*, with a small staff of regular officers and long service non-commissioned officers.

These centres will carry out all administrative work in connection with mobilization as regards the provision of personnel and animals, and the storage and maintenance of material. On mobilization, the reserve units will actually be formed at the centres.

To provide continuity, each region commander has in peace two staffs :—

(i) An active category, available for the mobilized higher formation in war.

(ii) A territorial category, available for the staffs remaining in the interior on mobilization.

The region commander exercises in peace both the command of the troops in the region, and the territorial command. He may be designated to command a corps on mobilization ; in this case he is replaced in command of the region by a general officer selected and prepared for this duty in peace.

(d) *Mobilization procedure.*

The 3 *disponible* classes can be called up at any time without issuing the order to mobilize.

The 16 classes of the 1st Reserve join the colours immediately the mobilization of their class is ordered.

The 8 classes of the 2nd Reserve are called up individually on mobilization.

(e) *Expansion for war.*

The following figures are taken from the debates in the French Chamber, and the mobilization time-table can only be taken as approximate.

(i) *Mobilization of the Active Divisions (Forces Permanentes).*

The 20 white active divisions are mobilized by calling up the three *disponible* classes, and withdrawing all men with less than six months' service.

(ii) *Formation of Reserve Divisions.*

One first line white reserve division is formed in each region on mobilization. A strong cadre is detached from each active division to mobilize the first line reserve divisions.

One second line white reserve division is subsequently formed in each region with older reservists. Cadres for these divisions will be obtained from mobile units of the *Garde Republicaine* and from long service non-commissioned officers employed in peace in administrative services.

Further expansion in France will depend on the mobilization of war industries.

(iii) *Time-table of mobilization.*

The 8 higher establishment infantry divisions of the covering force will be ready to move within a few hours of mobilization. They are, however, not at war strength in peace, and will take some days to be completed with personnel and animals.

The 12 lower establishment white infantry divisions should be ready to move by the 8th day of mobilization. Presumably the 5 Expeditionary Force divisions and the Colonial Dépôt division will be ready in less than the same period.

The 20 first line white reserve divisions should be ready in less than three weeks from mobilization.

The 20 second line white reserve divisions should be ready between the 3rd and 6th month after mobilization ; additional divisions from West Africa and other colonies should also be available in this period.

4. *Strength and composition of the field army.*

In the debates in the Chamber, the Chief of the General Staff stated that 30,000 men were required in the field army, for each mobilized division and its proportion of Corps, Army and G. H.-Q. troops.

For an initial army of 46 infantry divisions, the French will thus have to place about 1,400,000 in the field.

It must be realized that from the outset, the mobilized French Army will be an army of reservists, with a very low proportion both of long service non-commissioned officers and of serving soldiers of the annual contingent ; the proportion of long service personnel will be higher in the Colonial Expeditionary Force divisions.

In the 40 white divisions on mobilization there will be only—

39,597 long service non-commissioned officers in combatant units.

11,319 long service non-commissioned officers in administrative services, and

120,000 conscripts with over 6 months' service.

The remainder of the 1,200,000 required for these divisions, *i. e.*, over five/sixths of the force, will be reservists.

5. *Criticism of the reorganization.*

The following points merit consideration, especially if one remembers the short period of colour service and the very high proportion of reservists in the future mobilized French Army :—

- (i) 106,000 long service non-commissioned officers are generally acknowledged as insufficient for mobilization needs ; 150,000 are really required.

- (ii) By the provisions of the Law of Cadres and Effectives, the French General Staff have definitely adopted an army based on man power and on the fullest use of national reserves, as opposed to a small professional army and intensive mechanization. This apparent disregard of recent developments in mechanization is largely due to the expense involved and the impossibility of equipping a large army at the outset with machines. The new organization is, however, in theory, a distinct improvement, being based on sound and definite principles. At the same time it is intentionally framed so as to give the necessary elasticity for the increase or decrease, by decree, of certain types of units, as, for example, air squadrons, tank battalions and specialist units, and for the adoption of new ideas suited to modern war.
- (iii) The effectives available are insufficient for the number of units and formations laid down ; this necessitates a certain number of units in each regiment being maintained in cadre in peace. This will be a source of weakness to the first line troops on mobilization.
- (iv) The value on mobilization of Reserve officers and non-commissioned officers, who will only have served 6 months as such in the " active army " is problematical.
- (v) In case of mobilization, insufficient stiffening by white men of native troops is provided for.
- (vi) The unequal incidence of colour service on whites and natives, being in the proportion of 1 year to 3 years, may cause trouble if it is exploited by propagandists.

The above points are realized by the French, and have been discussed in the Chambers and commented on in the Press.

6. Conclusion.

To sum up, the reorganization scheme as a whole has a sound frame-work, reduces the period of colour service of the individual, but retains his services in case of national danger for 28 years. It appears that by reversion to 20 years as the age for conscript service in 1935 and for the ensuing four years, the dangerous period due to war losses in 1914-18 may be tided over and the annual contingent kept nearly up to establishment. The *couverture* on the frontier in case of mobilization should be ensured by the active army, expanded

by the *disponibilité* classes. Colonial and overseas defence is arranged for on sound lines. The French claim that the organization is not aggressive, and is based on the democratic principle of the *nation armée*, besides showing a considerable reduction in peace time formations and effectives. An excellent organization for utilizing all national resources has been arranged and only awaits legislation by the passage of the "Law for the Organization of the Nation in time of War".

Reorganisation of the Frontier Defences.

See Monthly Intelligence Summary, Vol. XI, No. 6, October, 1927, page 218, and Vol. XII, No. 5, March 1928, page 150.

A Decree of 28th March, 1928, makes the following changes in the duties and constitution of the *Commission d'organisation des régions fortifiées* :—

- (1) The Commission is now charged with the supervision of all frontier defences, and not merely those of the north-east frontier.
- (2) The Inspector-General of technical artillery research and experiments is made a member of the Commission.

Communist Activities in the French Army.

In a debate in the French Chamber on 16th March, on the question of releasing imprisoned Communist Deputies, M. Barthou, the Minister of Justice, made an important statement as to the danger of Communist propaganda in the army, and in particular of a Communist party order to the party members to furnish information to the party headquarters regarding their military status and mobilization orders. M. Barthou said that "by centralizing the information thus obtained throughout France, the Communist party would be in possession of sufficiently precise details respecting mobilization to enable it to hinder its progress..... The Government are warned, and they have warned the Chamber: neither the Chamber nor the Government can now plead the excuse of ignorance. To yield would be to abdicate: to abdicate would be almost to betray the country. The Government will not abdicate."

The *Temps* of 20th March contained a short communiqué to the effect that "M. Barthou has conferred with the *Procureur Général* respecting the military information asked for from its adherents by the Communist party, in the circumstances which the Minister for Justice explained to the Chamber."

NOTES ON MILITARY REVIEWS.

"REVUE MILITAIRE FRANCAISE."

Published by Berger-Levrault, Paris. Price, 5.50 francs.

January, 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Part 1.)

The first instalment of a study of the organization of the battlefield in Champagne in 1914-18. Part 1 gives a brief outline of (1) the German offensive of September, 1914 ; (2) the French offensive of 1915 ; (3) the French offensive of April-May, 1917 ; (4) the German attack of 15th July, 1918 ; (5) the French offensive of 26th September, 1918.

2. *Anti-Aircraft Artillery—Its Employment and Reorganization.* By Commandant Vauthier.

The object of the article is to point out how simple anti-aircraft work is. It is contended that the rôle of anti-aircraft artillery is simpler than that of any other kind of artillery, and that anti-aircraft units require a smaller proportion of specially trained men, as they must be more reliant on mechanical devices for the efficacy of their fire. The question of depth in anti-aircraft defence and the protection of troops on the move are inadequately dealt with. The article savours of static warfare : it contains little of value.

3. *The 2nd Infantry Division of the Prussian Guard, 21st and 22nd August, 1914.* By Commandant Maury. (Concluded.)

This article, and the first part in the December issue of the "Revue," provide an interesting study of the difficulties of command in open warfare ; the lack of co-operation between divisions ; the maintenance of contact with the enemy ; the co-operation of artillery and infantry ; the execution of orders given by a higher commander who is not in touch with the situation. At one period on the morning of 22nd August matters were so confused that both French and German forces simultaneously withdrew from the battlefield.

4. *The Tangier Question.* By Commandant Galy.

The author commences by stating that the Tangier question has been invented by diplomats. He gives a sketch of the history of

Tangier, and of the negotiations and successive international agreements at the beginning of the 20th century, which led to the treaty of 1923 between Great Britain, France and Spain. A summary of this treaty is given. The article concludes with a statement of the claims of Spain and ambitions of Italy. The author trusts that France will be supported in her attitude by the firmness of Great Britain.

5. *In French Morocco in 1925 ; The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (Continued.)

This instalment deals with the problems of (1) the building up or reorganization of a front ; (2) the assumption of the offensive ; and (3) the reorganization of the army and the absorption of reinforcements from France.

February, 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Part 2.)

Part 2 consists of a record of the work carried out in 1915-17, in preparation for the offensives on the Champagne front. Some statistics are given in connection with the development of railways and roads, the supply of ammunition and engineer stores, the provision of hospitals and the means of evacuation of wounded, of camps and water supply. No deductions are made. The record does not mention the precautions taken against air attack or against gas. Nor is any mention made of the difficulty of concealment from the air of preparations carried out on the scale described.

2. *The Lessons of the Moroccan War (1925-26) on Questions of Aviation.* By Colonel Armengaud. (Part 1.)

The author is a leading light in French aviation. He was Marshal Foch's air adviser in 1918. He made a considerable reputation in Morocco in command of aviation, during the campaign dealt with in these articles.

In this first article he endeavours to draw conclusions from recent experience in Morocco which may be applicable to European warfare of the future. He emphasises the value of aircraft as *l'arme de couverture par excellence*, and the possibility of aircraft being rapidly concentrated at the decisive point. For efficient action air units must be mobile ; they must be capable of carrying their ground personnel

and the stores required for one or two weeks' action by air. Hence he advocates the requisitioning of civil aircraft as carriers for fighting units. He estimates that, given favourable weather conditions, the whole of the aircraft in France can be concentrated on the frontier in two days, and that the air forces from North Africa could join them in three days, staging in Corsica on the way. It is interesting to note that, in his plans for the future, he visualises five French armies deployed between the Vosges and the Sambre. The V Army taking the offensive on the left, supported by the IV Army immediately to the south. He notes the necessity of motor-cars at advanced aerodromes for communication purposes. He emphasises the special necessity, at the outset of operations, of concentrating all air-power against the main objective, in spite of the calls which will be made on it to undertake various other missions.

3. *The Serbian Victories in 1914.* By Lieut.-Colonel Desmazes and Commandant Naoumovitch. (Continued.)

Previous parts of this article appeared in the September, October, and November, 1927, issues of the "Revue Militaire Francaise."

This instalment deals with—

- (1) The re-organization of the Serbian and Austro-Hungarian forces on the Drina (frontier) after the Austrian defeat in the Tser region.
- (2) The Serbian offensive in Srem (Syrmia), 6th-14th September, 1914.
- (3) The beginning of the second Austro-Hungarian offensive in Serbia, 7th-15th September, 1914.
- (4) The Serbian offensive in Bosnia, 15th September-25th October, 1914.
4. *In French Morocco in 1925: the Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (Continued.)

This instalment begins with the appointment of Marshal Petain to the general direction of operations in Morocco. On 21st August, at a meeting at Algeciras with General Primo de Rivera, he agreed on a combined plan with the Spanish forces. The French operations consisted of—

- (1) A preliminary advance in Beni Zeroual territory, immediately north of Fez, to obtain a suitable line of resistance north of the river Ouergha, and to gain a jumping off position for further operations.

- (2) A main operation against the Ouriaghel and Touzine tribes north of Taza, from which Abdel Krim drew his stoutest supporters. A result of the latter operation was that the French were able to gain touch with the Spanish troops based on Melilla. Two oblique aeroplane photographs reproduced are reminiscent of the north-west frontier of India.

5. *Events in China: 6th April-15th December, 1927.* By Commandant Girves.

A clear and concise record of events in China, in which the bewildering moves of the various Chinese generals are correlated, and an attempt made to put them in some sort of perspective. The author begins with a description of the Soviet organizations under Borodin, and their activities. He emphasises the fact that as soon as the Southern leaders got rid of the tutelage of Borodin, victory deserted them. It is not one of the habits of a Chinese general to fight for a principle, even though the principle be that enunciated by Karl Marx. He concludes that the Russians did not succeed in gaining the sincere friendship of the Chinese any more than any other Power has done, but once foreign influence is withdrawn, China falls back into disunion and disorder. He refers to the landing of Japanese troops to safeguard Japanese interests in Shantung, but nowhere in the article is British action at Shanghai or elsewhere mentioned.

The author belongs to the General Staff, "Ministere de la Guerre."

Reviews.

General Rampont's article in the "Revue des Deux Mondes," "*Cavalerie aux Armées*," summarised on page 248, has been the subject of much discussion among officers of the French Army.

March 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Part II.)

On the 12th September, 1918, the French Fourth Army received the order to prepare for the break through of the German front from the Suippes to the Aisne, with the object of exploiting success towards Vouziers. This instalment gives an outline of the administrative measures taken in connection with railways, roads,

supply, ammunition, transport, artillery and engineer stores, evacuation of sick and wounded, traffic control, water supply, &c. The influence of communications on the success of the operations is emphasised.

2. *In French Morocco in 1925. The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (Part III.)

Bad weather made operations impossible after the beginning of October. Heavily equipped European troops could not compete during the winter months in rain, mist and mud, against the mobile Riffi. Before leaving on 20th October, Marshal Petain arranged for pressure to be maintained on the enemy by political means, by constant raids, by special light detachments and by friendly tribes. These measures were carried out by General Naulin. The importance of the maintenance of the moral of the troops during the winter months is emphasised. The expansion of the material resources of the French army, the development of communications and the provision of accommodation and necessities of life, are described.

3. *Leadership and War.* By Commandant de Gaulle.

An interesting analysis of the qualities required of a leader in war ; the difficulty of selection of leaders in peace time ; and the present day tendencies which militate against the production of commanders.

4. *The Serbian Victories in 1914.* By Lieut.-Colonel Desmazes and Commandant Naoumovitch. (Part V.)

At the end of October the strategic situation of the Serbian Army was a precarious one. The Austrians threatened with their superior resources in artillery, to crush and turn the Serb right (northern) flank. The Serbs were forced to retire. Exhaustion, lack of food, bad weather and the serious moral effect of fleeing refugees, made the retirement a difficult one. From 10th to 15th November, the Austrians were able to advance to the line of the River Koloubara. The Serbians fought on this river line from 17th to 22nd November. Continuous fighting from 22nd to 28th November led to the evacuation of Belgrade, the transfer of the Serbian Government to Nish, and the further retirement of the army.

5. *The lessons of the Moroccan War (1925-26) on questions of aviation.* By Colonel Armengaud. (Part II.)

Colonel Armengaud asks what is the proportion of aircraft to other arms in a European war? He considers from experience in Morocco that the proportion of aircraft in future wars will be much greater than ever used before. He then discusses the relative effect of aircraft assisting land forces, and aircraft attacking the back areas of an enemy independently. He emphasises that, to obtain success in war, it is essential that the air objective and the military objective must be the same. Air action must rapidly be followed by land operations. He then gives his opinion on the rôle of "*aviation de ligne*," in other words, purely offensive aircraft as distinguished from aircraft with specialised rôles, such as artillery observation, reconnaissance, &c.

6. *Field works in the German Army.* By X.

The anonymous author draws attention to the great amount of earth works and field defences carried out by the Germans during the war of 1914-18. The Germans have not forgotten the tradition which they established during the war, of efficient field fortification. Their training now includes a great deal of practical instruction in field works, more especially in the art of camouflage and the crossing of rivers.

The article states the amount of money voted for 1928 for instruction in field works for field engineers and infantry.

April, 1928.

1. *The Organization of the Battlefields of Champagne during the World War.* By Commandant Roques. (Conclusion.)

This instalment gives tables of supplies and transport, and shows the organization for ammunition and engineer supplies and the evacuation of wounded. A section is also included on the reorganization of communications and the work of the supply services during the battle, from 26th September to 22nd October 1918. The conclusions drawn by the author from his study are:—(a) That a modern army can, with difficulty only, operate further than 70 kms. from its railhead. (b) The results obtained in the various phases of a battle depend directly on the degree of preparation made. (c) Finally, success depends on the close collaboration of staff and supply services.

2. *In French Morocco in 1925. The Restoration of the Military Situation.* By Captains Loustaunau-Lacau and Montjean. (Part IV.)

The authors discuss the necessity for and the difficulties of training troops engaged in this type of warfare. They emphasise the most important rôle of the infantry and more especially of the individual man. In European warfare individual effort is absorbed and carried forward in the mass. In tribal warfare in Morocco, on the other hand, success depends on the confidence, physical fitness and military training of the individual soldier. The conditions of Moroccan warfare relegate the artillery to a secondary rôle; 65, 75 and 100 mm. pieces on pack gave the best results against fleeting targets. The rôle of cavalry similarly was limited to close protection, except under the open conditions of the Chaouia, where cavalry action on a wider scale could be contemplated. The action of tanks appears to have been very limited. Aviation rendered much help to the troops; this is dealt with in a later article. Mobile columns of 6 to 7 battalions, 2 batteries and a squadron, is recommended as most suitable for this type of warfare.

3. *Landings on Hostile Coasts.* By Colonel Alléhaut. (Part I.)

The author points out the necessity for the study of such operations, in case they may have to be undertaken during the course of a campaign. The main heading for the preliminary plan are stated and briefly discussed. The necessity for air superiority is not emphasised, and it is doubtful whether the author sufficiently realizes its importance and the difficulties of secrecy.

4. *Serbian Victories in 1914.* By Lieut.-Colonel Desmazes and Commandant Naoumovitch. (Conclusion.)

The Serbian counter-offensive of 2nd-15th December, 1914, and the recovery of Belgrade are described. The precarious strategical situation of the Serbs in 1914 should be better known, but the wretched quality of the sketch maps accompanying this narrative makes it difficult to follow the operations, from which otherwise many useful lessons could be drawn.

5. *Lessons of the Moroccan War (1925-26). On Questions of Aviation.* By Colonel Armengaud. (Part III.)

Details of the intimate co-operation of aviation with other arms are given. The form of warfare was peculiar owing to the nature of

the country, and the armament and characteristics of the enemy. Colonel Armengaud deduces, however, that many lessons learnt would be of value in European warfare in such regions as the Vosges, Black Forest, Jura and Alps.

6. *German Permanent Fortifications in 1927.* By C. L. L.

An interesting summary of the German fortifications in 1914 and of what remains of value in 1927. By the Treaty of Versailles, the Germans have lost the possibilities of manœuvres with which their fortifications endowed them on the Western front. On their Eastern frontier, Thorn and Posen have become Polish, but East Prussia is still strongly defended by the fortified barrier of the Mazurian Lakes and by the fortress of Königsberg. The Southern frontier has become important on account of the creation of Czecho-Slovakia ; here the old fortresses of Ulm, Ingolstadt and Königstein, though capable of a certain degree of resistance, have not been modernized.

GREECE.

Training.

The French Military Mission continued its work throughout 1927 and as a result there has been a distinct improvement in the standard of proficiency of the Greek regimental officer. The Greek Government has signed a new contract with the mission prolonging its engagement until 1st October, 1929. Under the new contract the number of French officers is to be reduced from 16 to 10 ; other conditions remaining unchanged. General Girard, the head of the mission, is due to return to France next June and his successor, General Brallion, has arrived in the country.

No manœuvres took place in 1927, nor, for financial reasons, are any likely to be held for some time. The usual garrison exercises were carried out and staff rides were organized by the French Military Mission.

Organization.

Official decrees have been published abolishing the 5th Corps Headquarters, the 7th Division and certain small units. The army thus returns to a four corps organization similar to that which obtained before General Pangalos created the 5th Corps. The latter has had little more than a theoretical, paper existence, and the same applies

to other units which have now been abolished. The net result, therefore, is that the Greek army remains at much the same strength as before. According to the official returns the present peace strength of the army is 79,000, but it is extremely doubtful whether this is a true figure; any estimate must be largely a matter of guess work and it is considered that for practical purposes the peace strength may be taken as between 60,000 and 70,000.

HUNGARY.

Army Estimates.

The Hungarian Army Estimates for the financial year 1928-29 amount to 132,836,050 pengö (£4,750,931) representing an increase of $12\frac{1}{2}$ per cent. over the sum voted for the preceding year. The largest increase is under the heading of Pensions.

ITALY.

Army Estimates.

The Italian Army Estimates for 1928-29, as compared with those of the preceding year, are as follows:—

—	1928-29.	1927-28.	Difference.
	Lira.	Lira.	Lira.
Ordinary	2,403,660,300	2,432,731,300	—29,071,000
Extraordinary	248,967,745	341,927,745	—92,960,000
Total	2,652,628,045	2,774,659,045	—122,031,000

(The value of the lira is 92 to the pound sterling.)

It is officially stated that the decreased estimates are rendered possible by a reduction in the cost of living. A supplementary vote of 100,000,000 lira has, however, already been approved for the provision of technical military material; if this is taken into account the actual expenditure will remain approximately the same as in previous years.

The above totals are made up of the following main items:—

—	1928-29.	1927-28.	Difference.
	Lira.	Lira.	Lira.
(a) Army	1,784,780,300	1,806,981,300	—22,201,000
(b) Carabinieri	452,750,000	511,000,000	—58,250,000
(c) Pensions, &c. ..	415,097,745	456,677,745	—41,580,000
Total	2,652,638,045	2,774,659,045	—122,031,000

General.

No radical change in the organization or administration of the Italian Army has taken place during the past year.

In view of the repeated changes which have done so much to hamper efficiency since the war, this simple announcement is of considerable importance.

The distribution of army corps was published in the Summary for February, 1927. To this list must now be added a new XI Army Corps, with headquarters at Udine, consisting of three divisions withdrawn from IV Corps (one division) and V Corps (two divisions). Corps artillery for this new army has not yet been formed.

Perhaps the most important event of the year with regard to Italian military organization is the announcement recently made by Signor Mussolini to the effect that the Fascist militia will form an integral part of the army in war. Detailed plans for the mobilization of the militia and its incorporation into the army have not yet been made public: as the militia contains a large number of army reserves, it is clear that the problem is not a simple one.

The 37-mm. trench guns with regiments have been abolished, and in their place approval has been given for the issue of two 65/17-mm. guns per regiment. These guns are the same as those issued to the pack artillery, and are manufactured in Italy. They are to be manned by infantry soldiers forming part of the regiment. The change has been welcomed by the infantry, but criticised to some extent among the artillery.

It has recently been decided that recruits will normally be called up in their 21st year, instead of in their 20th year. The change to the new system is to be effected gradually during the course of the next 5 years; during this transitionary period, the annual intake of recruits will be reduced from approximately 200,000 to 100,000.

JAPAN.**Despatch of Troops to Shantung.**

On 19th April the Japanese Cabinet, in view of the uncertain situation in Shantung due to the civil war in China, decided to despatch, as soon as possible, the 6th Division from Kumamoto—and in addition a telegraph regiment and a railway regiment—for the purpose of protecting Japanese residents at Tsinanfu and along

the Tsinanfu-Tsingtao railway. This force was about 5,000 strong and landed at Tsingtao on 26th April. Furthermore, it was decided that three companies from the Japanese North China garrison should be despatched by rail immediately from Tientsin to Tsinanfu and remain there until the arrival of the troops from Japan. These companies actually left Tientsin on 20th April, and arrived at Tsinanfu on 22nd April, within three days of the Cabinet decision. Japanese Military Headquarters at Tientsin stated, that if reinforcements were required for Peking and Tientsin, that they were expected to come from South Manchuria, where the Japanese 14th Division is quartered.

Two Japanese cruisers were also despatched to Tsingtao and a naval party, 500 strong, landed there on or about 20th April.

The Japanese Minister of Foreign Affairs stated that the Government were merely repeating the action taken last year. Emphasis was laid on the fact that troops were being sent for the protection of Japanese lives and property. He said that the morale of the Chinese northern troops was bad and that the position of Japanese residents might be serious if Tsinanfu were to fall. There are about 30,000 Japanese residing in Shantung, 2,000 of which are in the capital of the Province, at Tsinanfu. Japanese interests in Shantung are considerable.

Opposition newspapers in Japan strongly criticised the Government's action, but the Prime Minister issued a statement defending his action as unavoidable and declaring that the troops would be withdrawn as soon as possible.

MOROCCO.

French Zone.

The situation remains quiet. Further submissions of tribes in the Agadir region are reported.

Spanish Zone.

General.

The situation remains quiet, and the gradual surrender of arms continues.

The French Ambassador in Madrid visited the Spanish Zone in company with the High Commissioner; both subsequently visited the French Zone. The Spanish Press made much play with this visit, as showing the continued Franco-Spanish co-operation.

Reorganization of the Spanish garrison.

Considerable reductions and reorganization have been carried out in the past few months.

Future organization.

The Spanish Zone is divided into four military districts (*Circumscriptions*): Melilla, Rif, Ceuta-Tetuan, Larache.

The normal forces to be maintained in the zone are:—

	PRESENT STRENGTH.	
	Officers.	Other ranks.
<i>Spanish Regular Forces.</i>		
Staff	334	52
Infantry—		
4 infantry regiments	1,142	38,082
18 rifle battalions (<i>Qazadores</i>)		
Foreign Legion (8 <i>Banderas</i>)		
Cavalry—		
1 regiment	75	1,400
1 Foreign Legion squadron		
Artillery—		
4 artillery commands (1 per district). Each command has separate staffs for mobile batteries and for position batteries.		
The establishment is	197	6,090
9—10·5-cm. howitzer batteries.		
4—7·5-cm. batteries.		
4—7-cm. mountain batteries.		
4 position batteries (for outlying posts).		
3 coast batteries.		
2—15·5-c.m. howitzer batteries (cadre).		
Engineers—2 mixed battalions	126	3,909
Signals and M.T.—1 W/T and M.T. regiment	39	1,810
Air Force. One group of—		
2 wings of 4 squadrons	71	547
1 hydroplane wing		
Marines—1 company per district	11	450
Miscellaneous services and departments	294	5,393
<i>Native Regular Forces (Regulares).</i>		
Mixed Spanish and Native units.		
5 mixed groups of Infantry and Cavalry at Ceuta, Tetuan, Larache Melilla, Alhucemas	450	13,152
<i>Khalifian Forces.</i>		
The Khalifian Guard.		
<i>Mehallas</i> at Melilla, Larache, Tetuan, Tafersit, Ghomara, Jebala.		
Each <i>Mehalla</i> consists normally of 4 or 5 infantry <i>Tabors</i> and 1 cavalry <i>Tabor</i> .		
Other partizan units, <i>Idalas</i> and <i>Harkas</i> (native levies), and <i>Mokhaznias</i> (native police) are to be disbanded.		
Approximately	360	10,000
Total	3,099	80,885

A Royal Decree of December, 1927, laid down 90,000 all ranks as the maximum establishment in the zone.

Tangier Zone.

After months of abortive negotiations, the French and Spanish Governments have signed an agreement modifying certain provisions of the Tangier Statute in favour of Spain.

The whole Tangier question is now being discussed in a conference at Paris by representatives of Great Britain, France, Spain and Italy. The United States has notified these powers that it makes full reservation of its position regarding any decisions of the conference, which may affect American rights in Tangier and Morocco.

NORWAY.

Army Re-organization.

In July, 1928, the re-organization of the army comes into force. The effect of this re-organization, which has been brought about by the desire for economy, is to reduce further the strength of the army.

The following are the main lines of the re-organization :—

- (a) The staff of the Ministry of Defence will be reduced to six officials.
- (b) The pay of certain officers has been somewhat reduced.
- (c) During the period of transition, schools for non-commissioned officers will be reduced in number.
- (d) The reduction in the number of officers and non-commissioned officers :—

Generals by 50 per cent.

Lieutenant-Colonels by 21 per cent.

Majors by 26 per cent.

Captains by 43 per cent.

Subalterns by 63 per cent.

Colour-serjeants by 50 per cent.

Serjeants by 79 per cent.

- (e) It has been decided to reduce the cavalry from 16 squadrons to 12 squadrons, a further reduction being contemplated.
- (f) Recruit training has been fixed at periods varying from 30 days for the Train Corps, 72 days for infantry, to 90 days for cavalry and field artillery.
- (g) The posts of Commanding General and C. G. S. have been combined.
- (h) Military bands, of which there was one in each division, have been abolished.

Ski-running.

The following report from the 1927 Year Book of the Norwegian Ski-running Association shows to what a high degree of efficiency the Norwegian troops can attain :—

Last winter the troops stationed at Kirkenes marched on skis from Kirkenes along the Tena river as far as Alts, returning to Nyborgmeom at the end of the Varangerfjord.

The distance covered was 715 kilometres, and the company probably made a record in completing the journey in 23 days.

Depots were arranged at four places on the route, and provisions were transported from one depot to another, either on sledges drawn by reindeer or on "ski sledges" drawn by the men themselves.

In addition to a rifle, each man carried a bayonet, belt with cartridge case, and a knapsack weighing about 16 kilos. Officers and non-commissioned officers had pistol, field-glasses, map-case and a knapsack weighing about 12 kilos.

Clothing was as follows : The usual field uniform with military boots (not special ski-ing-boots), a fur cap with ear flaps, thick woollen socks and "toe caps." The skis were of the usual military type. Underclothes : half wool shirt and pants, foot rags (as is known, the Norwegian soldiers wrap their feet in a long rag instead of using socks. The socks mentioned above are worn outside these.) Each man had also woollen mittens and leather gloves.

The knapsack was the Bergen model, and each man carried part of a tent, and either a cooking vessel, a snow spade, or an axe.

The knapsack also contained a change of underclothing, a sweater, a sheep-skin jacket, a coat made of wind-proof canvas, and a hood of the same material. There were also sheep-skin breeches and breeches of canvas, and a cap to wear when in camp. An inner pocket contained a plate, &c., and provisions for the day, *viz.*, two boxes of reserve rations and one of biscuits. There were also reserve parts of ski bindings, ski "wax," water bottle or thermos flask, toilet articles, towel, shoe brush, &c.

There was one ski sledge for every 12 men to carry the officers' luggage and first-aid materials, &c., provisions for 1 day about 12 kilos, camping equipment about 8 kilos.

As regards the reindeer which were to accompany the expedition, it was necessary to carry "moss" for the animals and food for the drivers.

Spare clothes, skis, &c., were placed at the depots.

Each ski sledge was drawn by two men, who could travel with a fully loaded sledge in difficult country at the rate of 4·5 to 5 kilometres an hour. There was a change of "sledge drawers" once daily.

It is interesting to note that the men who took part in the march did so after only 5 weeks military training.

Without giving details of the journey, it may be worthy of mention that a considerable part of it was made on wet snow, which made running very heavy. There was also a heavy snowstorm, which compelled the men to remain at one of the depots during one day.

PALESTINE.

Transjordan.

On 20th February an agreement was signed between Great Britain and Transjordan. This instrument included the recognition of the independence of Transjordan, but at the same time it contained provisions to ensure that Great Britain could continue to fulfil her international obligations as a Mandatory Power under the League of Nations. In particular the treaty legislated for the guidance of Transjordan, by the British Resident and other civil and military officers appointed to represent His Britannic Majesty, in such important matters as foreign policy, finance, judicial safeguards for foreigners, and in the organization, administration and employment of her armed forces.

PERSIA.

Pahlevi Port.

In conformity with the provisions of the recent Russo-Persian agreement, the Russian Mission for the handing over of Pahlevi Port arrived in Tehran from Moscow on 10th December. The three Persian representatives were nominated on 27th November.

The Persian Army in 1927.*(a) General.*

During the past year little headway appears to have been made in the regeneration of the Persian army, promised by Reza Shah's accession to power. Corruption, in all its forms, still persists, training has remained at a very unambitious level, while the enthusiasm that inspired the troops at the time of the coronation of Reza Khan has evaporated. The majority of the higher commanders are men of little ability or character, and, consequently, the military operations of the year (except where tribal levies have contributed some successful fighting) have proved a record of incompetency and minor disasters.

(b) Finances.

The monetary allotment to the army in 1927-28 was, as in former years, 9,400,000 tomans. On the whole, expenditure has been placed under stricter control and the soldiers now receive their pay more regularly than was formerly the case. The War Office has, however, been unable to eradicate various malpractices which continue to cause an embarrassing drain on the funds at its disposal.

(c) Strength.

The estimated strength at the end of 1927 was 38,874, of which not more than 6 per cent. were conscripts.

(d) Composition.

The law of compulsory service was first enforced in the winter of 1926, when it was applied to the provinces of Tehran, Kasvin and Hamadan. This year it was intended to apply the law to all the provinces of Persia, but, owing to strong popular opposition and the agitation engineered by the mullahs, the Government were compelled first to give numerous exemptions, and finally to suspend conscription altogether.

(e) Organization.

In April, 1927, the divisional organization of the Persian Army was abandoned, and the troops in the provinces were organized into small "composite forces" of all arms as these were considered to be more suitable than a divisional organization for the rôle to be carried out by the Persian Army. Where two or more "composite forces" are combined under a single command, as in Lurestan and Kurdistan they are termed a "composite brigade."

At the moment the Persian Army is admitted to be incapable of mobilization ; for purposes of offence or defence against an external power, its value is, therefore, negligible. On the other hand, the present organization provides in each military area a self-contained force with a unified command and administration suitable for internal security duties.

The troops in the Central (Tehran) Division still comprise 1 cavalry, 1 artillery and 2 infantry brigades, but, since September 1927, the Divisional Headquarters has been abandoned, and each brigade has been administered and trained by Army Headquarters direct.

POLAND.

Corps of Frontier Guards. ("Korpus Ochrony Pogranicza.")

4. (a) *Increase of 5 battalions.*

In 1924 it was found necessary to organize a special armed force, called the Corps of Frontier Guards (K. O. P.), to maintain order and repel raids from beyond the frontier.

(b) *Relay race in the K. O. P.*

On the occasion of the third anniversary of their formation which fell in October, 1927, the Corps of Frontier Guards organized a relay race of an interesting nature. The race consisted in passing a baton from one end of the frontier guarded by the Corps to the other.

The race started simultaneously in the north and in the south.

Apart from its sporting side, the chief object of the race was to test the communications between guard houses and posts. The arrangements in each section for getting the batons through were made by the junior officers in the section, upon whose initiative and quickness of thought success depended. The distance to be covered by each individual soldier was 800 metres over good ground, and 500-600 metres, if the ground was boggy or very rough.

This picturesque event was won by the teams bringing the baton from north to south, who took 7 days and 1 hour, the average distance covered in each 24 hours by the winning baton being 173 miles.

PORTUGAL.**Communist Activity.**

According to press reports, Communist propaganda has been active in Portugal lately, and many arrests have been made.

Abortive League of Nations loan negotiations.

In response to an invitation from the Portuguese Government, a League of Nations Commission of Inquiry visited Portugal, to investigate the Portuguese application to raise a loan under the auspices of the League. A loan of £12,000,000 was hoped for. Owing to the refusal of the Portuguese Government to accept financial control by the League, the negotiations broke down at the March Council Meeting.

ROUMANIA.**The Roumanian Army.**

No important changes in the strength or organization of the Roumanian army have taken place during the past year, and its composition remains at 7 corps each of 3 divisions, a mountain chasseur corps of 2 divisions, and 3 cavalry divisions, formations being organized on the French model.

The death of King Ferdinand was a serious loss to the army as, besides being its titular chief, he took a keen interest in military matters and exercised a definite interest in questions of general policy and in the selection of officers for the higher commands. His opinions and selections were usually justified in the event.

RUMANIA.**Chemical Warfare.**

This scheme for the organization of chemical warfare in Rumania provides for an experimental section, a factory for gas masks and a gas school, but so far little has materialized. On the defensive side it is improbable that the army possesses more than 1,000 efficient respirators.

In the Budget for 1928 the following items appear :—

4,000,000 lei for School of Chemical Warfare.

6,500,000 lei for Laboratory Courses and Experimental Work on Chemical Warfare.

4,000,000 lei for Provision of Respirators.

It seems, therefore, as if something practical may be done during 1928.

SPAIN.

Spain and the League.

The Spanish Government has accepted the invitation from the League of Nations to resume active co-operation with the League.

SOVIET RUSSIA.

Turkistan-Siberian Railway.

1. The following account of this new railway, based on an article in "Izvestia" at the end of last year, gives some idea of the economic, as opposed to the strategic reasons for its construction, from the Russian point of view.

According to the Bolshevist account, the construction of the Turkistan-Siberian Railway has been undertaken mainly to guarantee the supply of cheap grain to Central Asia and the neighbouring districts (Siberia, Kazakstan and Kirghistan) and to facilitate thereby the cultivation of cotton in Central Asia.

The railway is also intended to open up the economic possibilities inherent in the wealthy districts through which it will pass, and thereby to extend the area from which the Soviet Government will be able to draw raw material.

The growth of requirements, especially of grain, in Central Asia is due to the increased consumption per head (said to be the result of the higher standard of living brought about by post revolutionary conditions among the peasant population) and to the artificial production of cotton in Central Asia in place of grain. Owing to the existing alignment of the railway from Siberia to Central Asia (Omsk-Tselinograd—Samara—Tashkent) the transportation costs of the grain requirements of Central Asia are excessive. It is to lower this cost, and to enable the cotton growing areas in Central Asia to be exploited to the full, that the new railway has been undertaken.

The production of cotton in this area also suffers, under existing transportation conditions, from an additional economic disadvantage, namely, the variation in price between cotton and grain (1 r. 70 kop. for cotton as compared with 3 r. 18 kop. for grain, per 16 kilogrammes).

The Soviet Government has definitely decided to complete the construction of the railway by the financial year 1930-31. All plans connected with its construction and finance have been calculated for this period. 150 kms. of rails on the northern section were already laid in 1926-27. During the year 1927-28, it was "planned" that 343 kms. in addition should be completed.

It is anticipated that the completion of the line within the allotted time limit will be facilitated by avoiding the direct route across the more difficult sections, *e.g.*, Kurdai Range, and selecting a longer but easier trace.

2. *Economic survey of the areas traversed by the new railway.*

(a) *Area "tapped."*—The railway will run from Aris (Tashkent railway) to Novosibirsk (Omsk railway) and will be approximately 2,550 kms. in length. (Aris to Lugovaya 424 kms., Lugovaya to Semipalatinsk 1,475 kms. and Semipalatinsk to Novosibirsk 653 kms.) The railway will run through, or very close to, the following districts:—Kazakstan A. S. S. R. (Tchimbkent and Auliatsinsk districts of the Sir-Darya Government, and the Semipalatinsk Government); Kirghiz A. S. S. R. (Frunze, Tchu, Talak, Karakol and Narin cantons) and the Western part of the Siberian Republic.

The total area which will be affected by the new line is estimated at 120 million hectares. Of this area agricultural land amounts to 48 per cent. of which, in 1927, only 4 million hectares were under cultivation, the most important district being Western Siberia.

(b) *Population.*—The population of the area in 1926 was approximately 5 million, distributed as follows:—

Western Siberia	..	..45 per cent.
Kazakstan	..	..43½ "
North Kirghistan	..	..11½ "

Western Siberia being the most densely and Kazakstan the most sparsely populated district.

(c) *Cattle.*—The head of cattle in the area was estimated to be 26 million in 1927, distributed as follows:—

Kazakstan	..	..	..65½ per cent.
Siberia	..	..	..21½ "
Kirghistan	..	..	..13 "

(d) *Minerals*.—The area contains some of the largest deposits of the common metals within the Soviet Union (in the Altai range, the Alexander range and near the Western Chinese frontier); large coal mines, estimated to have a capacity of 10 milliard tons of coal, are also situated near the railway and these are of particular importance in that they are situated in the vicinity of the metal ore districts.

3. *Economic development rendered possible by the construction of the railway.*

It will be seen from the foregoing that the area under consideration may be divided economically into three districts: Central Asia, primarily a cotton growing area, Western Siberia, primarily grain growing and Kazakstan and Kirghistan a mixed agricultural area suitable for grain and in places for cotton.

It may be said briefly that the economic plan is to force the cultivation of cotton in Central Asia at the expense of grain and to provide for the food requirements of the population by increasing the cultivation of grain in North Kirghistan and Western Siberia; the construction of the railway will enable this grain to be sold at an economic price in Central Asia. At present in the irrigated area of Central Asia, 20 per cent. of the area is under cotton cultivation; by 1930-31 it is intended to increase the total area under cultivation by 570,000 hectares, of which 30 per cent. will be given up to cotton cultivation.

Similarly, in Kazakstan the area under cotton cultivation is to be increased from $13\frac{1}{2}$ per cent. to $19\frac{1}{2}$ per cent. of the total by 1931.

Rice is the staple diet of a proportion of the population; its cultivation requires three times as much water as that of cotton, and is, therefore, antagonistic to the latter in an irrigated area. It is intended to develop the valleys of the rivers Ili and Tchu into rice growing areas to meet this demand, and thus to avoid competition in the cotton area.

4. *Comment.*

The foregoing project may be said to be typical of the "planning" operations of the Soviet authorities in the agricultural-economic field, and it will be seen that little regard is paid to the eccentricities of human nature. Whether such a wholesale State enterprise will materialize, or whether it will be crushed at birth by the incubus of the official machine remains to be seen.

SOVIET UNION.

Tenth anniversary of the Red Army.

Celebrations throughout the U. S. S. R. took place on 23rd February to commemorate the 10th anniversary of the Red Army.

The following circular is typical of the instructions which were issued to ensure that this memorable occasion was suitably observed :—

The fundamental problems in regard to the celebration of the 10th anniversary of the Red Army should be :

- (1) Review the war preparedness and defensive capacity of the Soviet Union.
- (2) Strengthening the relations between the toiling masses and the R. K. K. A., and popularisation of prevailing problems of war constructive work.
- (3) The expansion of work in the Osoviakhim, the further enlistment of the wide masses of workers, peasants and peasantry in all military work carried out among the population.
- (4) Popularisation of the history of the civil war, fighting history and heroes of the Red Army.
- (5) Explanation of the *role* played by the Communist Party as organisers and leaders of the Red Army.

The celebrations of the 10th anniversary of the Red Army must be kept in the character of a holiday by the wide masses of workers and peasants, and marked as such by them.

- (1) Organization of public meetings of toilers with speeches regarding the defence of the country and preparedness of the Red Army.
- (2) Organization of evening meetings of defence and Red Army in clubs and reading rooms.
- (3) Carrying out of mass demonstrations of fighting preparedness by the toiling masses (demonstrations of organizations, Osoviakhim, physio-culturists, komsomol, women's organizations and army sections, etc.).
- (4) Organizations of new rifle ranges, circles for military knowledge, musketry circles, circles for physio-culturists, military circles, etc.).

- (5) Organization as far as possible on the day of celebration, with the help of workers and peasants and Red Army men, of mass sports meetings, musketry competitions, review and competition of military work among the population, etc.
- (6) Excursions of the toilers to barracks and clubs of military sections, and to inspect local celebrations.
- (7) A wide campaign in the central and local press.
- (8) To circulate among the population masses of military literature.

For the carrying out of the celebration of the 10th anniversary of the Red Army it is absolutely necessary to attract party members, komsomoltzi, soviets, professionals, and public organizations, and in the same way representatives of peasants and workers. For the preparatory work in the governments, districts and villages commissions must be organized to comprise representatives of the highest district organizations and military sections.

(Signed) Secretary Zk. S. KOSIOR.

Note.—The 10th anniversary of the Red Army will be celebrated on the 23rd February, 1928, and great preparations are being made throughout the Soviet Union.

Strength of the Osoaviachim.

At the recent meeting of the Central Soviet of the Osoaviachim it was reported that about 1·8 per cent. of the total population of the U. S. S. R. belonged to the society. It was also pointed out at this meeting that the journal of the society, "Aviation and Chemistry", is too serious and technical for the average reader, and it was recommended that this publication should be produced in a more popular form.

SUDAN.

JANUARY 1928.

The Nuer Disturbances.

In December, growing disaffection amongst certain sections of the Nuer tribes on the Upper Nile culminated, first, in open defiance of Government authority and, subsequently, in the murder of Captain

Fergusson, a District Commissioner in the Bahr-el-Gazel province. Punitive measures were undertaken by units of the Sudan Defence Force and a flight of aeroplanes and though the swampy and wooded nature of the country has inevitably prolonged the operations, the situation is being rapidly restored.

FEBRUARY 1928.

The Nuer Disturbances.

The situation having been restored by the combined action of Sudanese troops and aircraft, the majority of the latter have now been withdrawn to their peace stations. Political officers are engaged in touring the disaffected areas with an escort of Sudanese mounted rifles and police.

SWITZERLAND.

Fortress Garrison Troops.

These troops, which garrison the defended areas of St. Gothard and St. Maurice, are now to be under the chief of the artillery arm for command and administration.

SYRIA.

General.

The situation remains generally quiet. The Syrian elections were held without disorder.

In view of possible trouble with the Wahabis, the French propose gradually to strengthen the southern portion of the Damascus Command. They propose to establish two posts on the Rutba—Damascus motor track; a road is being built from Soueida, in the Djebel Druze, north-east to the Safa, where a new post is to be established.

French Order of Battle.

See Monthly Intelligence Summary, Vol. XI, No. 6, October 1927, page 233.

Two further "regular" battalions have been withdrawn from Syria; a new Syrian battalion and a camel company have been formed; in addition 2 further companies of *Chasseurs Libanais* are in process of formation.

The French garrison now consists of 12 "regular" and 8 Syrian battalions, with ancillary units.

The Northern Frontiers Boundary Commission.

The Franco-Turkish deadlock continues.

The question is now being discussed at Angora by the French Ambassador, and it is probable that the final negotiations will take place at Geneva. It appears that one of the chief reasons for the Turkish attitude is that they fear that the "Baz dı Canak" (the north-eastern corner of Syria) may become a Kurdish enclave. In this they seem to be justified, for the French authorities in Syria have promised land in the "Bez" to Hadjo Ag'aa, a prominent Kurdish chieftain who has on a previous occasion raised the standard of revolt in Turkey, and is said to be only too willing to cause trouble to the Turkish Government in the future, should a suitable occasion arise.

TURKEY.

Amendment to the Constitution.

On the 9th April the Grand National Assembly of Turkey unanimously passed a Bill originated by the Prime Minister, Ismet Pasha, to separate religion from the State. The Bill provides that Islam shall no longer be the State religion of Turkey, that deputies and State officials shall in future take the oath of office on their honour and not by the ancient formula of "By Allah," and that the Grand National Assembly of Turkey shall no longer be charged with the application of the Mohammedan law. This last has been a dead letter since October, 1927, when the new civil code replaced the Moslem judicial system.

The secularization of the Turkish State is the logical sequence of the abolition of the Caliphate in 1924, the suppression of religious orders, and the prohibition of the wearing of Moslem head-dress. The decision of the assembly has excited no comment in the country but this is perhaps no indication of the feelings of the people, in view of their natural pacifity and the repressive nature of the present republican *regime* in Turkey. In the army there is still a proportion of devout Moslems, particularly amongst the senior officers, of whom Fevzi Pasha, the Chief of the General Staff, is one. It is not known how they will view the abrogation of one of the fundamental provisions of the Turkish Constitution; "The religion of the Turkish State is Islam."

War Department Appropriation for 1928-29.

Details with regard to the Appropriations Bill for the ensuing fiscal year were published in the Monthly Intelligence Summary for February, 1928. The Bill received the signature of the President on 23rd March, but during its passage through Congress alterations were made which necessitate modifications in the figures previously given.

The amounts finally appropriated, as compared with corresponding amounts for the year 1927-28, are as follows :—

—	1928-29.	1927-28.	Increase or decrease.
	dollars.	dollars.	dollars.
For military activities	309,601,568	295,420,178	+14,181,390
For non-military activities ..	88,915,653	92,137,829	—3,222,176
Total	398,517,221	387,558,007	+10,959,214

The above figures include in each case appropriations on account of amounts over-expended in certain directions during the previous year.

In addition 1,844,419 dollars was re-appropriated for military activities from certain balances unexpended during 1927-28.

Provision has now been made for a slight increase in the strength of the National Guard, which it is estimated will reach 180,000 by the end of the forthcoming financial year. Allowance has been made for active duty training not exceeding fifteen days, for officers of the Organized Reserves. The appropriation for the Reserve Officers Training Corps shows an increase of more than 300,000 dollars over the amounts allotted in the previous year. The amount granted for Citizens' Military Training Camps is the same as in the Bill for 1927-28; this is calculated to cover training expenses for 35,000 trainees.

The fact that additional expenditure has been sanctioned for the National Guard, Organized Reserves, and the Reserve Officers Training Corps is indicative of the importance attached by the American military authorities to those non-regular organizations, which represent the primary means of expanding the American Army in the event of war.

The general impression derived from the study of the Appropriations Bill for 1928-29 is that the present administration, in spite of its devotion to ideals of economy, has not starved the army, nor has Congress shown itself to be parsimonious. The increase in the appropriations for military activities is relatively small, and does not carry any particular significance, except perhaps as a further proof if one were needed, that the United States, while ready to renounce war as an instrument of policy, is not yet prepared to rely upon treaties alone as a guarantee of peace in the future.

Recruiting and Man Power.

1. Terms of service.

Every male Turkish subject is liable to military service between the ages of 20 and 46.

The first year is taken up with the formalities of registration, medical examination and classification. During the second year recruits are sent to corps or departments in two batches, on 1st May and 1st November, and serve periods ranging from $1\frac{1}{2}$ to 3 years according to the arm of the service.

The remainder of the time a man is liable to military service is spent in the Reserve. Under exceptional circumstances the duration of military service can be prolonged.

The periods of training range from 6 months to one year (the latter period for the Navy).

There are certain exceptions for younger sons whose brothers have died on service and for men who have to complete a course of study at one of the approved schools or who are not sufficiently fit at the time of examination for service.

By payment of an exoneration tax of £ T600 a man may attend a course of instruction instead of performing military service.

2. Recruiting organization.

The recruiting organization is on a territorial basis, with certain exceptions owing to the difficulties of recruiting those districts inhabited by the Lazes, Kurds and the mountainous district of Armenia. Turkey is divided into nine territorial areas corresponding generally to corps.

The territorial areas are divided into military districts which are sub-divided into recruiting bureaux, each of which has a commandant with a small staff. In December, the bureaux send out to each village and caza lists showing men to be called up. This is known as "the first call." All persons of 20 years of age are obliged to report, either personally or in writing, to the recruiting bureaux, giving various particulars. The individuals are then warned when to expect "the last call" and what to do when they receive it. This call is issued about 1st July each year, and those who are summoned by the first call are instructed to report to the Council of Revision. This Council consists of—

- (i) The Senior Civil Functionary of the locality.
- (ii) The Commandant of the Recruiting Bureau.
- (iii) The Census Officer.
- (iv) A member of the administrative or municipal council of the locality.
- (v) Two doctors.

The documents of each recruit are checked and he is medically examined. If there are more recruits than are required, lots are drawn. Those drawing lots are handed over to a Commission consisting of—

- (i) The Commandant of the Recruiting Bureau.
- (ii) The doctors of the Council.
- (iii) A naval officer (only where men are required for the Navy).
- (iv) A Gendarmerie officer.

The Commission allots the men to the various arms as required.

These operations result in each class being divided into four categories, *i.e.*, fit for service under arms; fit for service in a non-combatant branch; re-examinable; and not fit for service.

The first two categories are then warned on what date they will be required to join up.

3. *Recruiting statistics and reserves available.*

It is estimated that each year about 80,000 men are fit for service, but that only about 50,000 are actually taken. Although the President of the Republic has recently stated that Turkey could count on producing an army of a million men, it is unlikely that she could equip and arm more than 300,000 at the outside.

4. *Officers of the Reserve.*

The Turkish Government passed a new Law, No. 1076, on 16th June, 1927, laying down the Regulation for the Reserve of Officers. The chief features of the Law are as follows :—

(a) *Recruitment.*—Officers of the Reserve are obtained from four sources :—

- (i) Officers who have retired from the Army, Gendarmerie and Marine.
- (ii) Those who, before the publication of the Law, were known as Reserve officers.
- (iii) Warrant officers who, on retirement, are drafted to the Reserve with the rank of lieutenant.
- (iv) Individuals who, when they are called up for service under the Law of Military Service, elect for service as Reserve officers.

These last-named must have a diploma at one or other of the Lycees obtained after 5 or 7 years, or at one of the professional schools, or the College for the Merchant Service. They first serve for 6 months in the ranks as candidate officers, then receive 6 months' instruction at the Harbie Mektubi (in the case of officers of the Line), or, if they are doctors or other professionals, 6 months at special schools, and, finally, according as they have obtained at their Lycee, no military certificate, a 2nd or a 1st class certificate of military aptitude, they do 6, 4 and 2 months respectively with a unit. If they have passed the necessary tests they receive commissions as 2nd lieutenants; those who have distinguished certificates at their Lycees pass direct to 2nd lieutenant from the school; those who fail at the tests complete 1½ years in the ranks with the rank of serjeant. During the whole of their training period, as regards clothing, rations and pay, they are treated similarly to the regular officer candidates of the Harbie Mektubi.

(b) *Registration and calling to the colours.*—Officers of the Reserve are required to keep their local recruiting officer, or, if abroad, their ambassador, minister, or the nearest consul informed of their address, and they are called up once a year, at the time of the annual levee of conscripts to report either personally or in writing. They are liable to be called to the colours either for service or for manœuvres

so long as they are of military age. They are thus called for training usually every 2 years for a maximum period of $1\frac{1}{2}$ months. Certain exemptions are made in the case of indispensable officials, such as Members of Parliament and National Commissions, civil officials, such as Valis and Secretaries of Government, and a proportion of school teachers.

(c) *Promotion.*—In peace time officers of the Reserve are promoted equally with officers of the Army, the time passed as civilians counting as military service under the condition that a 2nd lieutenant does one period, a lieutenant two periods and a captain eight periods of instruction, and that they are well reported upon. To obtain field rank they must belong to a combatant arm and they must have fulfilled all the conditions laid down in the Law for Promotion of Regular Officers. In war they serve under the same conditions as regular officers.

YUGO-SLAVIA.

The Budget for 1928-29.

On 7th March the Skupstina passed Defence Estimates for 2,428½ million dinars (£ 9,000,000 approximately). This represents an increase of 79 million dinars over the estimates for the previous year.

In introducing his estimates before the Financial Committee of the Chamber, General Hadjié, the Minister for War, pointed out that the estimates did not indicate a marked increase above the actual expenditure of 1927-28, taking into account the large supplementary estimates (51 million dinars) which had been rendered necessary in that year.

The official figures are liable to a certain degree of subsequent manipulation, and they do not therefore furnish a precise guide to the policy to be adopted or the expenditure likely to be incurred. From an analysis of the estimates, however, it does not appear that any striking changes or abnormal increases are contemplated in the near future.

The numbers for which estimate has been made in the Budgets for 1927-28 and 1928-29 are as follows:—

	1927-28.	1928-29.	Difference.
<i>Army.</i>			
Officers	6,641	6,795	+ 154
Other ranks	100,900	101,810	+ 910
Cadets, &c.	5,250	5,321	+ 71
<i>Navy.</i>			
Officers	302	341	+ 39
Seamen	3,715	4,482	+ 767
<i>Gendarmerie.</i>			
Officers	91	102	+ 12
Other ranks	5,035	5,225	+ 190
Total increase ..	..	..	+ 2,143

Increased allotments are included for the Navy (+10 millions) and Air Force (+3 millions). General Hadjié insisted that these relatively small increases were not in any degree proportionate to the real needs of those two services, and he foreshadowed the inclusion of much larger sums in future budgets.

The officer strength in the Army is rising somewhat rapidly; this fact was adversely commented upon by some members of the Financial Committee, but the Minister was able to prove that numbers were still far short of establishment. He stated that the private soldier costs 7 dinars a day (approximately 6*d.*), which statement explains to a large extent the divergence between Yugo-Slav estimates and our own.

The Army in 1927-28.

1. Higher Command.

Throughout the series of changes which have taken place in the constitution of the Government General Hadjié has remained in charge of the portfolio for war, which he assumed in December, 1926. General Pesié, the Chief of the General Staff, has held that appointment for more than four years.

2. Politics and the Army.

The continued political dissensions, which have been such a marked feature of the internal situation, have had little effect upon the army. During the recent Cabinet crisis in February, that very irresponsible politician, M. Radié, startled the country with a proposal for the formation of a Coalition Government under the leadership of a non-party man, preferably a soldier. Although this attempt to drag the army into the forefront of the political stage evoked a violent outburst in the Skupstina, it does not appear to have had any real measure of support either in Court circles or in the army itself.

3. Conclusion.

The Yugo-Slav Army is undoubtedly the most formidable force which exists to-day on the Balkan Peninsula. It is also the surest guarantee of stability within the country itself.

On the other hand it cannot yet be regarded as a match for the armies of any of the first class powers. The chief reason for this is still the question of armament, although real efforts are undoubtedly being made to improve equipment and to organize local resources for the production of munitions. Shortage of trained officers and deficiency of rail communications are contributory reasons of much importance.

CORRESPONDENCE.

Proposed memorial to the late Lieut.-General Sir Ronald Charles Maxwell, K.C.B., K.C.M.G.

SIR,

At a recent meeting of friends and comrades of the late Lieut.-General Sir Ronald Maxwell it was decided to erect a memorial to mark the admiration and respect for his character which was felt by all who knew him, and to commemorate the eminent services which he rendered, particularly when Quartermaster-General to the Forces in France during the Great War. A representative General Committee and a small Executive Committee have been formed.

The General Committee have decided, with the permission of the Dean and Chapter, to place the Memorial in Rochester Cathedral, close to where so much of Maxwell's Home Service was spent and where he was married. It is hoped to raise sufficient funds for a stained-glass window and tablet.

It is thought that the scheme will appeal to many of those who were associated with Sir Ronald Maxwell during his career, and that these may welcome the opportunity of contributing to the Memorial.

Donations will be gladly received and acknowledged but no statement of individual contributions will be published.

Lloyd's Bank, Limited (Cox's and King's Branch), No. 6, Pall Mall, S. W. 1, have kindly consented to open an account called "Maxwell Memorial Fund," into which contributions should be paid direct.

Yours faithfully,

H. M. LAWSON, LIEUT.-GENERAL,

*Chairman of Executive Committee.***Protection at Rest. Outposts.**

DEAR SIR,

Throughout Section 31, Chapter IV I. T. Vol. 2, emphasis is laid on the fact that the principles underlying the occupation of an outpost position are the same as those laid down for a normal defensive position, *i.e.*, as far as forward infantry are concerned, dispositions in a series of defended localities in such depth as numbers and the nature of the ground permit.

The only reason advanced for the use of the words 'piquet,' 'supports' and 'reserves' is 'to enable an outpost position to be occupied rapidly and methodically.'

I submit that, apart from being of assistance, these terms lead to confusion. The word 'piquet' is not used in the chapter on defence; 'supports' is a word which has been deleted from both attack and defence.

It goes without saying that the simpler our training manuals, the better. The addition of the terms 'piquet' and 'supports' tends to complicity and the regarding of outposts as being some special form of military manœuvre entirely divorced from defence.

Provided that the infantry company, platoon and section commander has the two factors of 'defence in depth' and 'mutual support by fire' imbued in his mind, I cannot see that the inclusion of what is acknowledged to be an alternative nomenclature for defended posts, defended localities and company reserves is of any value.

Yours faithfully,

S. W. JONES, CAPTAIN.

The Austrian Tyrol.

DEAR SIR,

It may be of interest to some of your readers, who are desirous of learning German, to know that special facilities for studying this language are offered at Kitzbuhel, where the British Vice-Consul (Mr. Forbes Dennis) and his wife, assisted by an expert resident German tutor, receive a limited number of pupils at the Tennerhof, their chalet above the town.

Kitzbuhel, one of the healthiest and most picturesque spots in the Austrian Tyrol, lies between Innsbruck and Salzburg, and the journey from London is easy. It is renowned for all winter sports, while in summer there is tennis, bathing and every variety of mountain excursion.

I may add that the instruction, food and accommodation are all excellent, and that both Mr. and Mrs. Forbes Dennis are delightful hosts.

The terms are six guineas weekly.

If any of your readers wish to spend a pleasant and profitable leave they can obtain further details from—

A. E. FORBES DENNIS, Esq.,

British Vice-Consul,

Tennerhof,

Kitzbuhel,

Tyrol, Austria.

I am, dear Sir,

Yours faithfully,

J. F. MEIKLEJOHN, MAJOR,

The Poona Horse.

REVIEWS.

THE PALESTINE CAMPAIGNS.

By

COLONEL A. P. WAVELL, C.M.G., M.C.

(Messrs. Constable & Co., Ltd., London, 1928), 12s. 6d.

It is difficult to put down this engaging work without reading it right through to the end. For the ordinary reader it provides a most lucid narrative of a series of operations which were so complete in themselves.

For the student there is generally a most accurate and clear account of campaigns, conducted under the conditions of moving warfare, which are worthy of close study. This short volume of some 250 pages gives the best account of these campaigns which has as yet appeared. For this reason, as well as for its fair criticism and clearness of expression, it will prove invaluable as a groundwork for more detailed study. The author is perhaps happiest in his description of the strategic considerations which influenced Lord Allenby's decisions. While he pays a just tribute to the genius of this great Commander, he emphasizes how much success had been prepared by the "foresight and strategical imagination" of his predecessor Sir Archibald Murray. To quote Lord Allenby's own words—"The organization he created, both in Sinai and Egypt, stood all tests and formed the cornerstone of my success."

The engagement, which the troops under Sir Archibald Murray fought, which gave the most far reaching results was Romani.

"Romani was a decided victory for British arms, and the fact that even more striking success might perhaps have been won must not be allowed to disparage the result." This result was in reality the security of Egypt and the Canal from further enemy attack. The engagement therefore merits a clearer description than that given by the Author. There is a reference, at the end of the narrative of this engagement, to the difficulties of water supply, "but the brilliant work of Smith's Mobile Column showed what might have been done." The reader may search in vain to ascertain what this Column actually did.

The Author deals kindly with the passive defence of the Canal in early February 1916. It is thought that as valuable a lesson could be drawn from the failure of the Cavalry on this occasion as from the brilliant successes of the mounted arm in Palestine. A few minor criticisms will not detract from the value of a book which every officer should possess. It is true that the rainy season, described on page 7, lasts from November to March; but the period when "large tracts of the plain land become a sea of mud and the roads are often unpassable," with the resultant effect on military operations, may be calculated, with greater accuracy, as lasting from approximately the second week in December to the last week in February.

The picture which the general description of the country leaves in the mind of the reader is not sufficiently clear. One of the most important roads "from Beersheba by Hebron up the spine of the Judaran Range to Jerusalem and thence on to Nablus" is more accurately described thus on page 69, than as "crossing the range from North to South" on page 7.

The maps generally are not in keeping with the high standard of the text; while the reference to Map V on page 29 is an obvious error.

The brief reference on page 180 to the time lost in overcoming the difficulties and forcing a crossing of the swollen Jordan, pays very scanty tribute to the skill of the Engineers and the perseverance of the troops.

The Author apparently fails to appreciate the significance of the infantry attacks made on the first days of May 1918 during the second raid on Amman (page 187). There was no question of the Infantry being able to force the Nimrin position. The attacks were made with increased persistency in order to attempt to alleviate the perilous position of the mounted brigades in Es Salt.

In his concluding Chapter Colonel Wavell brings out the true lesson of the Campaign as "not so much the value of the horseman, as the value and power of mobility, however achieved." He further lays emphasis on the great advantage of surprise, dependent as it is on mobility; and on training which gives the ability to manoeuvre.

He contributes a very able dissertation on "whether a mechanized force could have carried out even more expeditiously and with less loss what the cavalry accomplished in Palestine."

This is perhaps the most valuable chapter in this attractive volume. It is worthy of very careful consideration. While the writer questions whether the exponent of the six-wheeler would agree that the Sinai desert would prove impracticable for this form of mechanical transport; he considers that, for his greater profit, every student of war should read this last chapter of Colonel Wavell's book in conjunction with the last chapter of "Where Cavalry Stands to-day" by Lt.-Col. H. V. S. Charrington, M. C., 12th Royal Lancers.

Careful consideration of the views of these two able soldiers may help him to preserve a balance in regard to one of the most difficult military problems of the day.

THE STAFF AND THE STAFF COLLEGE.

By

BREVET-MAJOR A. R. GODWIN-AUSTIN, O. B. E., M. C.

(Messrs. Constable & Co., Ltd., London, 1927) 21s.

The British public—and especially the British military public—is very apt to be antagonistic to anything with which it is not acquainted, and Major Godwin-Austin, in writing the first book about the Staff College, has done a great service in dispelling some of the mysteries and myths connected with that institution.

He has evidently delved deep into the archives and unearthed many long hidden facts about the history of the Staff College, and in presenting them he has a happy knack of dressing them in a fluent style and surrounding them with interest and humour.

The story of the Staff College, and the strong path of development of Staff training, forms an interesting commentary on the advance of military thought in the British Army.

When in 1799, Gaspard Le Marchant obtained the support of the Duke of York to his scheme for founding a military educational establishment, it is strange to read that the man selected as the first instructor was a French émigré General Jarry who could not speak English but was popular at court. When this old warrior became too infirm to discharge his duties, the post was offered first to the Prussian Scharnhorst and then to the Frenchman Dumouriez.

The author guides us through the years of war when the Duke of Wellington took a deep interest in the College, and then through the ensuing years of peace when he tired of it and allowed it to drag on in a state of inefficient inertia.

Then came the Crimean War and the subsequent scandals which reflected ill on the staff work of the army, aroused the interests of the Prince Consort and the Duke of Cambridge in the military education of officers, and infused fresh energy into the life of the College. This, again, was followed by a period of peace, when the Duke of Cambridge, fighting or losing battles for the old traditions of the Army, took his stand against Lord Wolseley and his Staff College Officers—those “very ugly and very dirty officers.”

At this time it is curious to learn how technical was the training of the future Staff Officer. Many hours were spent in the study of Euclid and logarithms and much depended on an exact knowledge of how to tie a military knot correctly. The Army is much indebted to Lord Wolseley for introducing a more practical curriculum.

In July 1905, owing to the representations of Lord Kitchener, the first Staff course in India was held at Deolali and in June 1907, the present Staff College at Quetta was opened by General Smith-Dorrien, thus inaugurating an Imperial General Staff.

In the latter part of the book, the author gives an interesting account of life at the Staff College to-day which will be most useful to all who propose going there. He shows that work is not unmixed with play and that the course at Camberley entails two years in surroundings which are ideal for sport and games.

Major Godwin-Austin's book will do much to show that modern methods of training should make the Staff Officer of to-day, and the future, a practical, human, tactful man of the world, rather than a high-falutin' impractical theorist and this cannot fail to engender that confidence between the staff and the regimental officers and soldiers which will be of such paramount importance in the fast moving complicated wars with which we are threatened in the future.

ON FUTURE WARFARE.

By

COLONEL J. F. C. FULLER, C.B.E., D.S.O.

(Messrs. Sifton Praed & Co., London, 1928) 12s. 6d.

This is a collection of 17 lectures and articles written by Colonel Fuller from time to time in various magazines and journals.

Their main theme is mechanization and the replacement of our existing army by a highly mobile mechanized force.

The central problem of the book is "half an inch of steel to cancel out half an ounce of lead." As Colonel Fuller very rightly says, we ended the last war fully convinced that in face of the stopping power of the bullet, the unarmoured soldier is powerless to advance without very adequate artillery support which would render the power of the defence helpless, and, even then, one or two isolated machine-guns which escaped the artillery bombardment, were apt to hold up the attack of a whole division.

Our programme for 1919 was based mainly on tanks, aeroplanes and gas, and, so convinced were we of the possibilities of the tank, that in the peace terms imposed on Germany the construction of tanks was forbidden.

In spite of these lessons, our post-war army is equipped with even more infantry stopping weapons, without adequate addition being made to its offensive power by the increase of artillery and armoured fighting vehicles. Colonel Fuller's fear is that, should another war engulf the world to-morrow, "it would be the Great War over again, with its trenches, and its wire and its mud." It would be difficult to argue that he is not right—we have been slow to act upon lessons of the Great War—but during the last two years definite steps have been taken to modernise our army.

With the limited amount of money at our disposal, and with the limited experience we have had of the capabilities and tactical employment of armoured fighting vehicles in war, it would obviously be folly to commit ourselves prematurely to any one type. It is difficult to see what other course the authorities could have taken than to form an experimental armoured force before definitely embarking on any wholesale policy of mechanization.

Few will fail to agree with Colonel Fuller, even before reading this interesting book, that the war of the future lies in the machine and that muscle power will be replaced by petrol power.

IMPERIAL MILITARY GEOGRAPHY—5TH EDITION.

By

CAPTAIN D. H. COLE, M.B.E., F.R.G.S., A.E.C.

(Messrs. Sifton Praed & Co., Ltd., London, 1928). 10s.

This latest edition of Captain Cole's invaluable book does not differ to any great extent from the previous editions. The Chapter on India has been slightly expanded, but otherwise there are no important alterations. It still remains the standard text book on this subject for officers studying for promotion or Staff College examinations and it is rendered particularly useful by its chapter on Imperial Organization and the Appendices on the Constitutions and Governments of the Empire, which would usually be considered to be outside the region of pure geography.

THE FUTURE OF THE BRITISH ARMY.

By

MAJOR B. C. DENING, M.C., R.E.

*(Messrs. H. F. and G. Witherby, 326, High Holborn, London,
W. C. 1) 10s. 6d. nett.*

I

The conditions and the trend of events of the Great War took all belligerents by surprise. The possession by Germany of a superiority in machine-guns and in heavy artillery showed that she had assimilated some of the lessons of the Russo-Japanese War. On the other hand, her massed attacks proved clearly that she had failed to appreciate the annihilating effects of modern fire. The British Army, though imperfectly equipped, was perhaps the best trained force in the field. But no army looking back can pride itself on its prescience.

Great Britain, more than any other nation, seems to have taken this failure to heart and to be determined to be well in the van of progress should a malignant fate again cast her destinies into the cauldron of war. A notable band of writers, taking as their warp the latest experiences of the great war, is weaving a closely-reasoned, if imaginative, fabric of future war; the threads of whose weft are the numberless advances in science.

Major Dening is of this band and has made a valuable contribution to its literature. He is out for mechanization of the greater part of the British Army at home and abroad. He deals clearly with the obstacles to that aim, especially as regards its application to India, and indicates the means whereby they may be overcome. He examines the financial aspect of his proposals in some detail and claims that, though they increase the effective force of the army, they should nevertheless render possible a considerable reduction in army estimates.

The book is, however, by no means free from blemishes. It is marred, for instance, by the introduction of a Prize Essay, dated 1924, which was written before the advent of tankettes and six-wheelers; and this essay, though brought up to date to some extent by remark in other chapters, gives a rather obsolete impression to the whole study. There are, moreover, certain definite points on which many people will find agreement with the author difficult. In building up his Ideal Army Corps, he takes as his basis a tank brigade (or regiment) containing one tank battalion and no less than three battalions of infantry transported in armoured carriers. He considers that two of the latter are required for 'mopping up' and for protection. Actually, 'mopping up' is no more required in a tank action than in a naval action, for victorious tanks will no longer withdraw to re-fit. By the right of conquest they will dominate the surrounding country, and field-workshops will be pushed forward into the conquered ground to effect repairs. And as to 'protection,' it is best afforded, not by infantry outposts, which can be outflanked and overrun, but by the distant guard of the lighter vehicles. The third battalion is held to be required in order to provide a sufficient infantry force for the passage of obstacles such as rivers and canals. But, surely, surely it is better to trust for this purpose to feinting, night work and rapid movement than to reduce the possible mobile firepower of the tank army by 75 per cent. Some infantry are undoubtedly required, but, until experience proves the contrary, not more than one battalion to a mixed brigade containing tanks, tankettes, armoured cars and guns. They would be carried, not as suggested in the book, 5 men to a 'carrier,' but in a roomy armoured vehicle taking 10-15 men and suitable for the rapid evacuation of wounded. Exception may also be taken to the employment of guns and machine-guns for close support tasks; for close support fire will not be required in the tank battle except in the case apparently envisaged by the

author of a combat in which infantry is still a dominant factor. Nor does there seem to be a need for a machine-gun battalion per division or for a medium battery. All available machine-guns should be in A. F. Vs. and the medium battery will only find a rôle in siege warfare. As regards the suggestions made for A. A. defence, the forward despatch by Corps H.-Q. of guns for the protection of divisional areas, which may be moving at the rate of 100 miles a day, does not appear to be a sound method of guarding against air-craft. With such rapidly moving bodies, the area system of protection must be abandoned and A. A. guns furnished for each speed group.

So much for objections. It remains to say that the book is one of the first attempts to grapple with the whole problem of mechanization in concrete fashion and is to be welcomed on that account. It contains many useful suggestions on the necessary adaptation of the Cardwell system, the provision of reserves, utilization of civilian transport and reorganization of the Territorial Army, and it deserves to be widely read.

THE FUTURE OF THE BRITISH ARMY.

II.

This book, as its title indicates, deals with the great problems which have to be faced in connection with the future development of the British Army. It points out the imperative need of mechanization, explains the chief administrative and financial difficulties in the way, and suggests a possible solution.

The solution outlined is one within the bounds of practical politics, and the author fully takes into consideration such formidable obstacles as the Cardwell system and the bugbear of financial stringency. Dealing, as he does, with such controversial matters as future developments in strategy, the composition of the Regular and Territorial Army, and the amalgamation of the three defence departments, his deductions must necessarily lay themselves open to criticism. It may be suggested for example, that the author does not fully appreciate the requirements and difficulties of the Army in India, and on occasions his enthusiasm, though generally kept well within bounds seems to run away with him when he contemplates the financial savings that would accrue from the scheme which he advocates.

Be this as it may, Major Denning's book deals concisely and logically with a subject which is of importance to all soldiers; it is written in clear military style, and it will well repay reading by all who are interested in the subject with which it deals, and anxious to keep in touch with modern developments.

THE JOURNAL OF THE SOCIETY OF ARMY HISTORICAL
RESEARCH.

VOL. VII, No. 27, January, 1928, 6s.

This Journal deserves to be better known. One is inclined at first to consider that it is only of interest to the antiquary or delver in dry records. But, it soon becomes apparent, on reading, that this is not so. In fact, the Journal is of absorbing interest as it enables one to visualize the spirit or "atmosphere" of a bygone day. Take, for example, "The adventures of Sergeant Benjamin Miller". Here is an extraordinarily graphic picture by an eye-witness of events over a century ago.

The writer describes the life of a gunner of the Napoleonic period, which, to say the least, was sufficiently haphazard and varied to suit the most intrepid soldier of fortune. One realizes the chance nature of voyages in those days, both from the point of view of capture by the French and of safety in sailing. The rough and ready medical arrangements, the hard life and lack of comforts, the crude recreations, all depict the tough fibre of which the Army of that day were made.

Historically, the diary is very accurate with an exceptionally good description of Sir John Moore's retreat to Corunna and the embarkation of the Army at that place.

The psychology of Miller is also interesting. With his puritan upbringing he is able to discomfit a priest in a discussion on the Scriptures and yet naively writes "I was nearly washed away in saving a cat when drunk" and again "but being so very drunk we could not find our ship"! He was no "grouser" and must have been stout-hearted; witness when, after Corunna, on arrival in England without money to buy food or drink and a 16 mile march before him, he remarks "We were well used to such fare and knew it would soon be over, so we thought nothing of it". His almost callous references to death and disease, his evident pride of country and his observant nature are noteworthy. Yet he has humour for he writes "few women (at Marmorice) are ever to be seen and even then so muffled up as to leave nothing perceptible but their eyes, which are so ugly as to suppress any desire to see the rest of their persons". We may assume that Miller was a typical product of his time and begin to realize why the map of the world is so covered with red.

This article is however by no means the only interest in the Journal "The Colours of the British marching regiments in 1751" must be of interest to all infantrymen, and "The Highland Military pistol" to Scotchmen—and Hythe.

Questions are solicited by the Editor and the Journal should thus form a valuable medium for eliciting any information required by regiments about their past history.

A commendable novelty is a list of the articles which will appear in the next issue of the Journal.

The Society is anxious to enlarge its membership, but apparently individual membership only is legislated for. It may be suggested that a fixed regimental or mess subscription would achieve the Society's object, while at the same time providing a Journal of considerable military interest.

BIG GAME SHOOTING IN THE INDIAN EMPIRE.

By

LIEUT.-COLONEL C. H. STOCKLEY.

(*The Oxford University Press, Bombay, 1928*) Rs. 12-6-0.

This is a most excellent addition to the literature on the most fascinating subject of big game shooting.

It is not only extremely interesting reading but very useful as a book of reference—particularly to the novice who is keen to take up this form of sport.

The book gives advice on the selection of a shooting ground, the choice of a rifle, and much useful advice on the stalk, tracking, beating, sitting up and how and where to shoot the animal when the sportsman has got within shooting distance.

The reader of this book will realize that big game shooting is not a sport to enter into lightheartedly but one which requires great study and application.

The fascination of the sport will however amply repay the sportsman for the trouble he takes over it.

REPUTATIONS.

By

CAPTAIN B. H. LIDDELL-HART.

(John Murray, London, 1928) 12s. 6d.

If Captain Liddell-Hart has not got quite the same gift as Mr. Winston Churchill for drawing character sketches so that the reader almost seems to see the subject standing out in bold relief, he has produced a remarkable collection of potted biographies of some of the leading soldiers of the war and summed up their characteristics and their attributes in no uncertain fashion.

His book tends to belittle the reputations of the chief figures such as Joffre, Falkenhayn, Haig and Foch, and to enhance those of the slightly lesser lights such as Gallieni and Hunter Liggett. Gallieni comes best out of this critical examination, but, fine soldier as he undoubtedly was, he was never actually tested in the trying capacity of Commander-in Chief in the field—he grasped the opportunity which he saw in his own particular locality, and so made possible the victory of the Marne. It is easy to say how much better he *would* have done than Joffre had he been in supreme command of the French armies—but this can only be a matter of opinion. Hunter Liggett only got command of the First American Army at the very end of the War and he can therefore hardly be classed with the remainder.

Marshal Joffre comes very badly out of Captain Liddell-Hart's critical examination. Not only is he blamed for the breakdown of the famous French plan XVII, but he is depicted throughout his period of chief command as a stubborn, brainless, and resourceless figure-head whose only value was his stolid calm under all eventualities. Captain Liddell-Hart sums him up thus "Joffre was not a general, but a national nerve sedative." Haig is most severely blamed for his "premature use of a handful of tanks which gave away the jealously guarded secret of this newly forged key to the trench deadlock."

His conduct of the campaign in France in 1916 and 1917 is described as "a painful indictment of the Commander-in-Chief's lack of vision and obstinate disregard of advice whose truth was borne out by the result." He is however credited with being a fine defensive general and a great English gentleman.

With regard to Foch he writes "It may be true that Napoleon forgot more than Foch ever knew. But Napoleon forgot, Foch learned."

The other "reputations" in this very interesting book are, Falkenhayn, Ludendorff, Petain, Allenby and Pershing.

It is rather a modern characteristic to belittle our public men and to compare disparagingly the leading soldiers of the Great War, with the Great Captains of the past. It is, however, very doubtful whether the stalwarts of the past would have come out any better under the same conditions; with their governments and the press in such close touch that every move came under a glare of criticism.

Throughout his book, Captain Liddell-Hart emphasises the value of surprise—he has no use for any commander who produced nothing startling and "Napoleonic." Surprise is certainly all important and the greatest of the principles of war, but there has probably never been a war where surprise was more difficult, on a grand scale, than in the Great War in France and Belgium, where the combatants were locked together from Switzerland to the sea and there were no flanks to turn.

Captain Liddell-Hart has certainly produced a most interesting book which will be widely read by civilians and soldiers alike but it is perhaps a little early yet to decide definitely the reputations of the leading soldiers of the Great War. In another 10 years—about the time when Earl Haig's book is expected to be published—we shall see them in a clearer and less personal light.

WHO'S WHO—1928.

(Messrs. A. C. Black, Ltd., London, 1928), £2-2-0.

The new "Who's Who" has just been published. This excellent biographical dictionary has now appeared regularly for the last 80 years, in the course of which it has become an indispensable book of reference for every library, reading room, and office. So accustomed are we, in fact, to being able to refer to it on any and every occasion, that we take its presence for granted, whereas its absence would call for immediate protest.

Consequently, in this review, it is only necessary to mention the fact that this year's "Who's Who" is out, and that it fully comes up to the high standard attained in previous years. It contains, in a very compact form, some 34,000 biographies, and is, in short, a volume to which all of us must refer some time, and some of us, all the time.

NEUVE CHAPELLE.

INDIA'S MEMORIAL IN FRANCE.

(Hodder & Stoughton, Ltd., London, 1927), Paper cover 2s. 6d.

Cloth edition, 4s.

It was a great inspiration that prompted the War Graves Memorial Commission to publish this Souvenir of the magnificent memorial to India's dead in France.

The memorial, which is situated appropriately enough in that place of awful memory, Port Arthur, at the junction of the La Bassee Road and the Rue Du Bois is described in detail in the narrative by Mr. Stanley Rice, late of the I. C. S.

A short account is also given of the brief but impressive ceremony of unveiling the Memorial inscription, which was performed at Neuve Chapelle by the Earl of Birkenhead on October 7th 1927, and which was attended by a Contingent from India representing the Indian units, which fought at the battle of Neuve Chapelle between 10th and 12th March 1915.

It will be a matter of gratification for those who served with the Indian Corps to read that the buglers who sounded the "Last Post" and "Reveille" at the ceremony, were drawn from those fine fighting units and old comrades of the Indian Troops, 1st Seaforths, 1st Highland Light Infantry, 2nd Black Watch and 2nd Leicesters.

Most of the addresses delivered at the Ceremony are reproduced for the first time "*in extenso*". The almost inspired words spoken by Lord Birkenhead on that occasion were published in some of the papers at the time but they well merit re-reading, while many will welcome the opportunity of reading the telling utterances both of Marshal Foch and Monsieur Perrier, the French Minister of the Colonies.

It is noticed that all the speeches, including that of the Maharaja of Kapurthala, were delivered either in English or in French and are so reproduced. It would perhaps have enhanced the value (though possibly also the cost) of this attractive souvenir to the Indian Soldier if these speeches had been translated into and reproduced in the Vernacular. The messages to the Indian Soldier and his relatives intended to be conveyed in the words of Lord Birkenhead and Marshal Foch should not be lost.

The prefatory message to the relatives of the fallen which bears the signature of His Majesty the King-Emperor might similarly have been translated.

The volume contains 25 photogravures of the Memorial in all its aspects and of the ceremony. For reasons of economy, these have been reduced in size consistent with clearness, yet they are adequate to give a very fair impression of the Memorial's magnificent proportions, and, at the same time, its elegant simplicity. It is a fine sample of the work of its designer, Sir Herbert Baker.

At the end are a series of photographs of the various War Memorials to Indian Troops erected in other parts of the Empire, *e.g.*, in Macedonia, Damascus, Port Tewfik, etc.

The position of the illustrations in relation to the text might have been better arranged. They are inserted in two batches between pages of reading matter in such a way as to split up its continuity, *e.g.*, Mr. Rudyard Kipling's speech at the luncheon after the ceremony is divided into two by eight pages of photographs.

The type of the book is clear and without trace of error. It is published at the extraordinarily low price of 2s. 6d. and merits a wide circulation. A cloth edition is also published at 4s. for those who wish for a more substantial volume.

The proceeds from the sale of the book are to be devoted to the furtherance of its distribution.

POLO PONY TRAINING WITH HINTS ON THE GAME.

By

COLONEL-COMMANDANT F. W. RAMSAY, C. B., C. M. G., D. S. O.

(*Messrs. Gale & Polden, Ltd., Aldershot, 1928*), 3s. 6d.

A most interesting little book and should prove of great value to beginners and to those who wish to train their own ponies.

The importance of the leg, as well as the hand, is emphasized.

This is a point that is often slurred over when discussing training of horses, and it is refreshing to read that hands are not everything.

THE CARE OF THE DOG IN INDIA.

BY I. ALSTON.

(The Oxford University Press, Bombay, 1927), Rs. 2-8-0.

This is a book on diseases of dogs in India written for laymen. It should prove valuable to amateur dog-owners who are not in direct touch with a veterinary officer.

The treatment suggested for various diseases appears to be sound and well-explained and the author has made his prescriptions as simple as possible.

Many owners of dogs will not share the author's preference for castor oil as a purgative. Liquid paraffin is nowhere mentioned in the book.

IBN SA'UD OF ARABIA.

By

AMEEN RIHANI.

(Constable and Co., Ltd., London, 1928), 21s.

This volume is a welcome addition to the limited number of useful books on Arabia, a country on which so much interest is now focussed, thanks mainly to the outstanding personality and ability of its ruler, Ibn Sa'oud.

The writer gives us a vivid picture in descriptive detail of the daily life, habits, and customs of King Ibn Sa'oud and his people.

He is an enthusiastic supporter of the policy of Ibn Sa'oud and shows clearly in his early chapters a strong disapproval of the manner in which the British Government has handled some of the Arabian problems.

The portions of the book describing the author's journeys through Arabia and his stay at Ar-Riyadh, Ibn Sa'oud's capital, are well written and full of interesting anecdotes and incidents.

A valuable chapter describes the Ikhwan and the tenets of Wahabism, the puritan movement which is now playing such an important part in the politics of the Middle East.

The book is well arranged and contains a large number of excellent illustrations. It can be recommended not only to the military student studying the complicated problems of Arabia, but also to the general reader to whom a book of travel in a little known country may appeal.

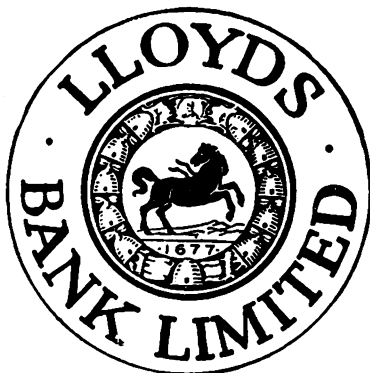
**FRANCIS EDWARDS Ltd.,
BOOKSELLERS,**

83, HIGH STREET, MARYLEBONE, LONDON, W. 1.

**A Large Stock of Books relating to INDIA, CEYLON, BURMA,
MALAY STATES, CHINA, JAPAN, AUSTRALIA, NEW
ZEALAND and the PACIFIC ISLANDS.**

CATALOGUES SENT POST FREE.

Please write and state subjects in which you are interested.



(Incorporated in England.)

HEAD OFFICE : LONDON, E. C. 3.

EASTERN DEPARTMENT :

14, KING WILLIAM ST., LONDON, E. C. 4.

CAPITAL—

SUBSCRIBED £ 73,302,076

PAID UP £ 15,810,252

RESERVE FUND £ 10,000,000

DEPOSITS, &c. (31-12-27) .. £ 358,657,619

OVER 1,700 OFFICES IN ENGLAND AND WALES.

BRANCHES IN THE EAST :

Bombay, Calcutta, Karachi, Rangoon, Delhi, New Delhi,
Simla, Rawalpindi, Murree, Srinagar (Kashmir),
Gulmarg.

GENERAL BANKING AND EXCHANGE business of every description transacted, including the issuing of **WORLD LETTERS OF CREDIT** payable throughout the World. **SAVINGS BANK ACCOUNTS** opened at any of the Bank's Branches in India or Burmah which are **WITHDRAWABLE BY CHEQUE**. Particulars on application.

Thos. Cook & Son, Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Passages engaged by all lines at same fares as charged by Steamship Companies. Holders of Cook's tickets met at all ports. Outward passages engaged and tickets supplied from any part of the world to India. Usual reductions obtained for Missionaries, Railway Officials, Families, etc.

Baggage received, stored and forwarded. Cargo shipped to all parts of the world at current rates. Inward consignments such as Hardware, Piecegoods, Machinery Stores, etc., for Messes and Clubs, cleared and forwarded at special rates. Insurance of all kinds effected on Baggage, Cargo, Livestock, Mess Property, etc.

The Oriental Traveller's Gazette containing sailing dates and fares of all steamers, together with invaluable information for travellers, sent post free on application.

Government Certificates accepted. No deposit required.

Thos. Cook & Son (Bankers), Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Current and Fixed Deposit Accounts opened. Interest allowed. Pay and Pensions collected. Periodical remittances made at current rates. Insurance premia paid.

Letters of Credit and Traveller's Cheques issued, encashable throughout the world.

Drafts granted and Telegraphic Transfers effected on all principal towns.

Insurance Life, Accident, Fire, Burglary, effected. Prospectus on application.

160 OFFICES THROUGHOUT THE WORLD.

EASTERN OFFICES : BOMBAY, BAGHDAD, DELHI, SIMLA, CALCUTTA, RANGOON, MADRAS, COLOMBO, SINGAPORE.



E. DUCKETT & Co

(By GOVERNMENT APPOINTMENT)

EAST STREET POONA

MONUMENTAL SCULPTORS

POWER MACHINERY & TOOLS

ARTISTIC MEMORIALS IN SELECTED

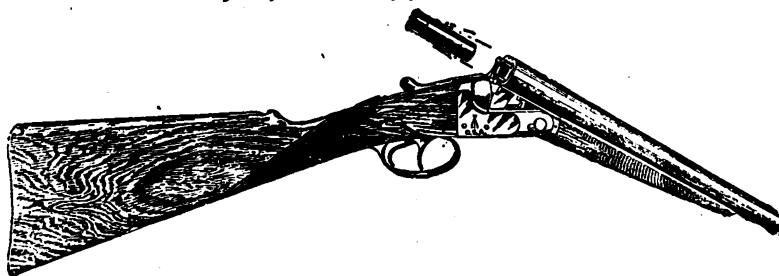
MARBLE ERECTED ANYWHERE IN INDIA

ELAHEE BUKSH & Co.,

ARMS AND AMMUNITION DEALERS,

== MEERUT AND KASHMERE GATE, DELHI ==

By Special Appointment



To H. E. the Earl of Reading, Viceroy & Governor-General.

LARGE STOCK OF

**Latest Model Shot Guns, Rifles, Pistols, Revolvers
and Ammunition.**

CHEAP AND RELIABLE

Shot Gun Cartridges ! A Speciality !! Record Sale !!!

Illustrated Catalogue Free.

A useful compendium of information for all who have interests in Asia.

£ 1

ASIATIC REVIEW

5s.

per annum

per issue.

Each issue contains nearly 200 pages and is generally illustrated.

THE VERDICT OF THE PRESS.

ENGLAND. *The Times*: "The January issue brings that quarterly to the fortieth year of its steadfast devotion to the mission of providing a platform for information and opinion on Asiatic affairs—political, social, literary, educational, commercial, artistic and general.....many eminent names appear in the list of contributors."

U. S. A. *New York Tribune*: "A well-informed quarterly dealing with Oriental affairs."

FRANCE. *Les Dernieres Nouvelles* (Strasbourg): "La grande revue de Londres."

INDIA. *Bombay Daily Mail*: "Of special interest as affecting existing trade relations."

The following articles on India were published in the Review during 1927;—

India at the Imperial Conference by THE MAHARAJA OF BURDWAN.

The Indian Co-operative Movement, by Sir LALUBHAI SAMALDAS.

Rural India and the Royal Commission, by Sir PATRICK FAGAN.

*Post and Telegraph Work in India, by Sir GEOFFREY CLARKE.

*Indian Forest Administration, by W. F. PERREE.

*India's Cotton Problem, by H. A. F. LINDSAY.

*The Indian Navy, by P. R. CADELL.

*Lectures delivered before the East India Association.

THE REVIEW PUBLISHES IN FULL

THE PROCEEDINGS OF THE EAST INDIA

ASSOCIATION.

NEW FEATURES :—

1.—THE ASIAN CIRCLE.

A SURVEY OF ASIATIC AFFAIRS.

(Published by arrangement in the *Asiatic Review*).

THE ASIAN CIRCLE is conducted by a group with personal knowledge of the various parts of Asia, and through the collective experience of its members aims at giving to the public an informed, progressive, and disinterested view of Asian affairs, both in detail and as a whole. Its membership includes:

The Right Hon. LORD MESTON, K. C. S. I. (President).

Sir GEORGE BOUGHEY.

Sir PATRICK FAGAN, K. C. I. E., C. S. I.

Sir JOHN CUMMING, K. C. I. E., C. S. I.

Lieut.-General Sir GEORGE MACMUNN, K. C. B., K. C. S. I., D. S. O.

2.—NETHERLANDS. (INDIES SECTION)

ARTICLES by expert writers on Java and Sumatra.

3.—FRENCH COLONIES.

Special contributions concerning Syria and Indo-China

4.—THE INNER EAST.

(Record of Events in Central Asia).

How to obtain THE ASIATIC REVIEW.

(41st year of Publication).

Please use this SUBSCRIPTION ORDER FORM

To EAST AND WEST, LTD.,

3, Victoria Street, London, S. W. 1.

Please send THE ASIATIC REVIEW for Twelve Months, beginning

with.....to.....

for which I enclose equivalent of £1 (One Pound Sterling).

(Please write full name and address distinctly).

By Appointment to
THE LORD IRWIN,
VICEROY & GOVERNOR-GENERAL
OF INDIA.



By Appointment to
H. M. THE KING.



By Appointment to
H. R. H. THE PRINCE OF WALES.

RANKEN & Co., Ltd.,

SIMLA, DELHI, LAHORE,
RAWALPINDI & MURREE.

ESTABLISHED IN CALCUTTA 1770.

CIVIL & MILITARY TAILORS,
GENTLEMAN'S OUTFITTERS,
AND BREECHES MAKERS.

ESTIMATES SUPPLIED FOR
FULL-DRESS AND MESS DRESS
UNIFORMS OF ALL REGIMENTS.

By Appointment to
H. E. Field Marshal Sir William R. BIRDWOOD, Bart.,
G.C.B., G.C.M.G., K.C.S.I., C.I.E., D.S.O.,
Commander-in-Chief in India.

TRAVEL.

TOURS

COX AND KINGS

WILL BE PLEASED TO FORWARD TO ANY OFFICER OR MESS
THEIR HANDBOOK OF FARES AND GENERAL INFORMATION
WHICH GIVES LATEST SAILINGS AND FARES OF ALL
THE LEADING STEAMSHIP COMPANIES.

DETAILS ARE ALSO GIVEN REGARDING PROCEDURE TO BE
ADOPTED IN CONNECTION WITH THE

LEE COMMISSION SCHEME.

GREAT CONGESTION PREVAILS ANNUALLY ON ALL STEAMERS
PROCEEDING HOMEWARDS DURING THE FIRST SIX
MONTHS OF THE YEAR, THEREFORE,

IF YOU ARE DUE FOR LEAVE

IN 1929

REGISTER YOUR REQUIREMENTS

NOW WITH

**COX AND KINGS
(AGENTS), LIMITED,
BOMBAY,**

**CALCUTTA—KARACHI—RAWALPINDI—SIMLA
OR SRINAGAR.**

TELEGRAMS : " COXSHIP. "

**IS YOUR HORSE, CAR, BUNGALOW AND KIT
INSURED ?**

**IF NOT WRITE FOR RATES.
MESS PRESIDENTS WILL BE
SPECIAL. QUOTED FOR COMPLETE
INSURANCE OF REGIMENTAL PLATE.**

PASAGES

MAPS PUBLISHED BY THE SURVEY OF INDIA

Are obtainable from the Map Record and Issue Office, 13, Wood Street, Calcutta, on the Public Service—on Cash Payment or Book Transfer, and, for private use, on Cash Payment or V. P. P.

Forest maps are obtainable only from the Officer-in-Charge, Forest Map Office, Dehra Dun.

Geological maps are obtainable from the Director, Geological Survey of India, Calcutta.

The Survey of India publish maps for the greater part of SOUTHERN ASIA between the meridians of 44° and 124° East of Greenwich and between parallels 4° and 44° north latitude.

2. Surveys executed after 1905 are classed as "MODERN," those PRIOR to that date are classed as "OLD."

3. Maps are printed in two styles or editions, viz., LAYERED and POLITICAL:—

(a) The LAYERED edition represents a map printed in colours with graduated layer tints of colour to show altitudes, and, shading to emphasize the hills. This edition gives prominence to the physical features.

(b) The POLITICAL edition represents a map printed in colours, but without graduated layer tints. Hills are represented by contours and shading. This edition gives prominence to the Civil Divisions of India which are shown by ribands of colour along boundaries of administrative partitions.

NOTE.—When maps are printed in colours, from mixed or old surveys the edition is styled "PRELIMINARY," and when published in black only or with hills in brown, the edition is styled "PROVISIONAL ISSUE."

4. The series of Modern maps are grouped under three Divisions:—

(I) GEOGRAPHICAL, embracing—

(a) SOUTHERN ASIA SERIES, scale 1 : 2,000,000 or nearly 32 miles to 1 inch in LAYERED and POLITICAL editions, size 36 inches \times 24 inches, price Rs. 6 per copy for the Layered and Rs. 3 per copy for the Political edition.

(b) INDIA AND ADJACENT COUNTRIES, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED and POLITICAL editions, or if from old surveys as PRELIMINARY EDITIONS; size 24 inches \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy.

(c) INTERNATIONAL MAP OF INDIA, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED edition (without shading of hills), size 30 inches \times 26 inches, price Rs. 3-0-0 per copy.

(II) TOPOGRAPHICAL, comprising maps on:—

(a) SCALE 1"=1 MILE in the POLITICAL edition, size 24 \times 19 inches, price Re. 1-8-0 per copy.

(b) SCALE 1"=2 MILES in the POLITICAL edition, size 24 \times 19 inches, price Rs. 3 per copy.

(c) SCALE 1"=4 MILES in the LAYERED and POLITICAL editions, size 24 \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy, and from old surveys as PROVISIONAL ISSUES, price Re. 1 per copy.

NOTE.—Index charts or Key maps to the Geographical and Topographical series are obtainable gratis.

(III) GENERAL MAPS which include:—

(a) GENERAL MAPS OF INDIA, scale 32 miles to 1 inch, in sets of 12 sheets, each sheet 25 \times 33 inches, in LAYERED and POLITICAL editions, price Political edition, Rs. 12 or Layered edition, Rs. 24 per set. Various maps of India on the same and smaller scales and miscellaneous special maps illustrating Railways, etc.

(b) PROVINCIAL MAPS, on scales 16 miles and 32 miles to 1 inch.

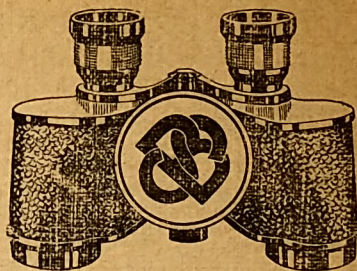
(c) DISTRICT MAPS, on scales 4 miles and 8 miles to 1 inch.

(d) CANTONMENT AND TOWN MAPS AND OTHER MISCELLANEOUS MAPS, of various scales and prices.

5. MAPS CATALOGUES can be obtained at ONE RUPEE per copy, postage As. 8 extra.

6. Maps can be mounted on cloth and folded or mounted on rollers for hanging, etc., at an extra charge.

7. The prices quoted for various maps are exclusive of postage and V. P. P. charges. Any further information may be obtained free of charge from the Officer-in-Charge, Map Record and Issue Office, 13, Wood Street, Calcutta.



BARR & STROUD
BINOCULARS
NONE BETTER---AND THEY'RE BRITISH
SHARP DEFINITION
LARGE FLAT BRILLIANT FIELD
PRISMATIC BINOCULARS.

Type.	Magnification.	Focussing.	Diameter of Objective.		Angular Field.	Field of View in yards at 1,000 yards.	Price.
			Ins.	m/m.			
C. F. 1	6	Central	0.9	23	8°	138	£6 10 0
C. F. 2	6	Central	1.2	30.5	8°	138	£8 2 6
C. F. 3	6	Eye-piece	0.9	23	8°	138	£6 0 0
C. F. 4	6	Eye-piece	1.2	30.5	8°	138	£7 7 6
C. F. 8	8	Central	1.2	30.5	7°	122	£9 10 0

GALILEAN BINOCULARS.

Type.	Magnification.	Diameter of Objective.			Inter-ocular Diameter.	Angular Field.	Field of View in yards at 1,000 yards.	Price.
		Ins.	m/m.	Lines.				
C. A. 2	3½	2.19	55.6	26	65 mm.	6½°	112	£2 17 6
C. A. 3	3½	2.0	50.8	24	63.5 mm.	6½°	112	£2 12 6
C. A. 3	3½	2.0	50.8	24	62 mm.	6½°	112	£2 12 6
C. A. 4	3½	1.75	44.5	21	63.5 mm.	6½°	112	£2 7 6
C. A. 4	3½	1.75	44.5	21	62 mm.	6½°	112	£2 7 0

Prices include leather cases and straps.

Send for free booklet J "On Binoculars."

BARR & STROUD LTD., ANNIESLAND, GLASGOW and 15 VICTORIA ST., LONDON, S.W. 1.

Telegrams—
 Telemeter, Glasgow.

Codes—
 5th and 6th Edition, A. B. C.

Telegrams—
 Retemelet, London

The JOURNAL of the UNITED SERVICE INSTITUTION of INDIA

CONTENTS.

Editorial.

1. A Re-definition of Strategy, by Captain B. H. Liddell Hart.
2. The New Organization, by Captain B. C. Fletcher, M. C.
3. Propaganda—its Theory and Practice, by Captain A. L. Pemberton, M. C.
4. Decline of the Offensive Spirit in the Infantry, by "An Infantry Soldier."
5. Army Nomenclature, by "Simplleitas."
6. Great Britain and the Channel Tunnel, by Major T. J. Ponting, M. C.
7. A discussion on the Tactical Handling in normal warfare of an Indian Battalion under the new Organisation, by "Jat."
8. To Gilgit by Air, by Colonel J. F. Turner, D. S. O.
9. Nigeria-1929, by Bt.-Lt.-Colonel A. E. Percival, D.S.O., O.B.E., M. C.
10. A critical Study of the Battle of Neuve Chapelle, by Captain O. G. Body, D. S. O.
11. The Evolution of the Infantryman's Weapons, by Lieut. R. G. Thurburn.
12. More Polo Notes, by "Gopti."

Military Notes.

Correspondence.
Reviews.



Printed by E. A. Smedley at
The Civil & Military Gazette Press, Lahore
And published by Major J. G. Smyth, for the United Service
Institution of India, Simla.
Price Rupees 2-8-0.
[All Rights Reserved.]

UNITED SERVICE INSTITUTION OF INDIA.

Rules of Membership.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Auxiliary Force, India, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members, the members of the Diplomatic Corps, foreign, naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms :—

Rupees 120 + entrance fee (Rs. *10) = Rs. 130.

Ordinary Members of the Institution shall be admitted on payment of an entrance fee of Rs. *10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Members receive the Journal of the Institution, post free anywhere.

Members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and Library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Sergeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 10.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution, on or after the 1st October, will not be charged subscription until the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

*Rs. 7 in the case of British Service Officers serving in India.

Contributions to the Journal.

All papers must be typewritten (in duplicate) and only on one side of the paper. All proper names, countries, towns, rivers, etc., must be in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., para. 204, and King's Regulations, para. 509.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published. Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

To

THE SECRETARY,

UNITED SERVICE INSTITUTION OF INDIA, SIMLA.

Dear Sir,

I desire to become a Life
Ordinary Member of the United Service Institution of India, and since I understand that no election is necessary in my case, I have filled in the Bankers' order form below.

Yours faithfully,

Name _____

Corps _____

Permanent address _____

Present address _____

Bankers' Order Form.

(Bankers) Messrs. _____

On receipt of this order, please pay to LLOYD'S BANK, COX'S AND KING'S BRANCH, SIMLA, for the UNITED SERVICE INSTITUTION OF INDIA, the sum of Rs. _____, being (* Entrance Fee and) Subscription, and the sum of Rs. 10-0-0 every succeeding January until further notice.

Ordinary Members.

		Rs.	a.	p.
*Entrance Fee	--	10	0	0
Annual Subscription	--	10	0	0
Total	--	20	0	0

Signature _____

Date _____

Life Members.

		Rs.	a.	p.
*Entrance Fee	--	10	0	0
Subscription	--	120	0	0
Total	--	130	0	0

* Rs. 7 only in the case of British Service Officers serving in India.

MILITARY WIDOWS' FUND,

BRITISH SERVICE

THIS FUND enables a British Service (Army) officer, by subscribing from Rs. 6 to Rs. 10 per quarter, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 8,775	to Rs. 12,375
For each child	„ 750	„ „ 1,125

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription and the sum for each child varies with age of child. Subscriptions are based on the rank of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer, but not in excess of 4 years.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return Home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Headquarters, Simla.

For admission and rules apply to :—

The Secretary,
MILITARY WIDOWS' FUND,
Army Headquarters, Simla.

United Service Institution of India.

PATRON :

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS :

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the United Provinces.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Governor of Burma.
His Excellency the Governor of the Central Provinces.
His Excellency the Governor of Assam.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

MEMBERS OF THE COUNCIL, 1928-29.

Ex-officio Members.

- | | |
|--|--|
| 1. The Chief of the General Staff. | 8. The Master-General of Supply in India. |
| 2. The Adjutant-General in India. | 9. The Engineer-in-Chief. |
| 3. The Air Vice-Marshal, Commanding R. A. F. in India. | 10. The Military Secretary. |
| 4. The Secretary, Army Department. | 11. The Director, Medical Services. |
| 5. Sir Denys Bray, K.C.I.E., C.S.I., C.B.E. | 12. The Director, Royal Indian Marine. |
| 6. H. G. Haig, Esq., C.I.E. | 13. The Director, Military Operations, General Staff, A. H. Q. |
| 7. The Quartermaster-General in India. | |

Elected Members.

- | | |
|---|---|
| 14. Major-General W. M. St. G. Kirke, C.B., C.M.G., D.S.O. | 17. Brigadier E. F. J. Hill, D.S.O., M.C. |
| 15. Major-General H. E. ap Rhys Pryce, C.B., C.M.G., D.S.O. | 18. Major T. C. E. Barstow, O.B.E. |
| 16. Colonel W. R. Blackwell, C.M.G. | 19. Major A. F. R. Lumby, C.I.E., O.B.E. |
| | 20. Squadron Leader E. J. Hodsoll |

MEMBERS OF THE EXECUTIVE COMMITTEE, 1928-29.

Elected Members.

- | | |
|--|--|
| 1. Major-General W. M. St. G. Kirke, C.B., C.M.G., D.S.O. (President). | 4. Brigadier E. F. J. Hill, D.S.O., M.C. |
| 2. Major-General H. E. ap Rhys Pryce, C.B., C.M.G., D.S.O. | 5. Major T. C. E. Barstow, O.B.E. |
| 3. Colonel W. R. Blackwell, C.M.G. | 6. Major A. F. R. Lumby, C.I.E., O.B.E. |
| | 7. Squadron Leader E. J. Hodsoll |

Additional Members.

- | | |
|---|--------------------------------|
| 8. Colonel E. C. Gepp, D.S.O. | 11. Major H. L. Ovans, O.B.E. |
| 9. Colonel M. Saunders, D.S.O. | 12. Captain C. W. Toovey, M.C. |
| 10. Colonel H. F. E. MacMahon, C.B.E., M.C. | |

SECRETARY & EDITOR
SUPERINTENDENT ..
LIBRARIAN ..
BANKERS ..

..BT-MAJOR J. G. SMYTH, V.C., M.C.
..CONDR. J. C. ALFORD.
..MISS W. MCCORMICK.
..LLOYD'S BANK, LIMITED,
(Cox's AND KING'S BRANCH), SIMLA.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed inside front cover.

3. The Reading Room of the Institution is provided with all the leading illustrated papers, newspapers, magazines, and journals of military interest that are published.

4. There is a well-stocked library in the Institution, from which members can obtain books on loan free. Books are sent out to members V.-P. for the postage.

5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in any part of the world.

6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found in para. IV, Secretary's Notes.

7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.

8. When temporarily in the U. K., Officers of the Indian Army can join the Royal United Service Institution, Whitehall, for a period of six months on payment of half a guinea, or for a period of one year on payment of a guinea.

**"IT SHOWS WHAT CAN BE
DONE, GIVEN GOOD
INSTRUCTION."**

*Extract from letter of candidate
who gained 700 marks out of 800
in "Business Organization" after
a course with*

EXPERT COACHING

**IN
BUSINESS ORGANIZATION
AND POLITICAL ECONOMY
FOR**

**STAFF COLLEGE
ENTRANCE EXAM.
IS PROVIDED BY**

PITMAN'S CORRESPONDENCE COLLEGE

**238. SOUTHAMPTON ROW,
LONDON, W. C. I, ENGLAND.**

PROSPECTUS ON APPLICATION.

United Service Institution of India.

APRIL 1929.

CONTENTS.

	PAGE.
Editorial	113
1. A Re-definition of Strategy	117
2. The New Organization	131
3. Propaganda ; its Theory and Practice	139
4. Decline of the Offensive Spirit in the Infantry	151
5. Army Nomenclature	155
6. Great Britain and the Channel Tunnel	158
7. A Discussion on the Tactical handling in normal warfare of an Indian Battalion under the new Organisation	172
8. To Gilgit by Air	182
9. Nigeria—1929	185
10. A Critical Study of the Battle of Neuve Chapelle	193
11. The Evolution of the Infantryman's Weapons	216
12. More Polo Notes	227
Military Notes	230
Correspondence	265

REVIEWS.

Some Aspects of Mechanization	267
-------------------------------------	-----

I.—New Members.

The following new members joined the Institution from 1st January to 28th February 1929 :—

ORDINARY MEMBERS.

Captain C. W. Morton.
 Major W. S. E. Money.
 Captain J. W. Rundall.
 Major G. H. Pengelley.
 Captain W. J. H. Bull.
 Captain D. MacD. Killingley.
 Captain B. S. Hey.
 Lieut. J. M. E. B. Coates.
 Captain F. C. W. Steed.

II.—Examinations.

(a) The following table shows the campaigns on which the military history papers will be set from March, 1929, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii) :—

1 Serial No.	2 Date of examination.	3 Campaign set for the first time.	4 Campaign set for the second time.	5 Campaign set of the last time.
1	March, 1929 ..	..	Palestine, 1917-18 (as given in serial 2, column 3).	Waterloo, 1915 (as given in serial in column 3).
2	October, 1929 ..	Egypt and Palestine, from the outbreak of war with Germany to June 1917.	..	Palestine, 1917-18, (as given in serial 2, column 3).

NOTE.—With regard to Army Order 363 of 1926, the above campaigns will not be divided into general and special periods.

(b) Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2.—*The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. C. G. Powels).

B.—OTHER BOOKS.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The Revolt in the Desert (T. E. Lawrence).

Allenby's Final Triumph (W. T. Massey).

How Jerusalem was Won (W. T. Massey).

Outline of the Egyptian and Palestine Campaigns, 1914-18
(Bowman-Manifold).

L'Attaque du Canal de Suez (Douin).

Army Quarterly—October 1920 (T. E. Lawrence's article).

Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T. Atkinson's articles).

Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's article).

Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).

R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's article).

U. S. I. Journal—October 1923 (Captain Channer's article).

3.—*The Dardanelles Campaign.**Description.*

- | | |
|--|--|
| Naval and Military Despatches .. | A clear account of the operations in detail from the G. H. Q. standpoint. |
| Reports of the Dardanelles Commission. | Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts. |
| The Dardanelles (Callwell) .. | The best account and criticism of the strategic conduct of the campaign. |
| Gallipoli Diary (Sir I. Hamilton) .. | The campaign from the point of view of the C.-in-C. on the spot. |
| Life of Lord Kitchener (Arthur) .. | Throws considerable light on Lord Kitchener's direction of the campaign. |
| The Dardanelles Campaign }
(Nevinson).
Gallipoli (Masefield) | Well written and picturesque accounts by eye-witnesses. |
| The World Crisis (Winston Churchill.) | |
| | Explains his part in inception of the campaign. |

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson). From point of view of the Five years in Turkey (Liman Van C. I. G. S. Sanders).
- Official Account: Official History of the War, Naval Operations, Vols. II and III.
- Gallipoli Campaign (Outline of Military Operations). By a Student.
- Experiences of a Dugout (Callwell).
- Despatches from the Dardanelles (Ian Hamilton).
- The Navy in the Dardanelles Campaign (Wemyss).

4.—The Mesopotamia Campaign.

- The Campaign in Mesopotamia, 1914-18 (Evans).
- Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).
- Critical Study of the Campaign in Mesopotamia up to April, 1917.
- Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
- The World Crisis (Winston Churchill).
- Notes and Lectures on the Campaign in Mesopotamia (A. Kearsey).

5.—Waterloo Campaign.

- Waterloo Campaign (J. H. Anderson).
- Waterloo (Hilaire Belloc).
- Wellington and Waterloo (Arthur Griffiths).
- Waterloo the Downfall of the first Napoleon (George Hooper).
- Campaign of 1815 (W. H. James).
- With Napoleon at Waterloo (E. B. Low).
- Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).
- Waterloo Campaign (S. C. Pratt).
- Wellington and Waterloo (G. W. Redway).
- Wellington Campaigns. Peninsula-Waterloo, 1808-1815, also Moore's.
- Campaign of Corunna (C. W. Robinson).

6.—*The American Civil War.*

- Stonewall Jackson and the American Civil War (G. F. R. Henderson).
 History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).
 History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).
 American Civil War (J. H. Anderson).
 The 1st American Civil War, 1775-78 (Henry Belcher).
 The American Civil War, 1861-64 (John Formby).
 History of the American Civil War (J. W. Draper).
 Fredericksburg and Chancellorsville (J. E. Gough).
 Battles and Leaders of the Civil War (Johnson and Buel).
 War of Secession, 1861-62 (G. W. Redway).

7.—*The East Prussian Campaign.*

- Tannenberg—First 30 days in East Prussia (Edmond Ironside).
 8.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*
 A Staff Officer's Scrapbook (Ian Hamilton).
 German Official Account.
 Lectures on the Strategy of the Russo-Japanese War (Bird).
 Question on the Russo-Japanese War (Brunker).
 Official Account: The Russo-Japanese War (Naval and Military), 3 Vols., published by Committee of Imperial Defence.
 Outline of the Russo-Japanese War (Ross).
 A Study of the Russo-Japanese War (Chasseur).
 My Experiences at Nan Shan and Port Arthur (Tretyakow).
 Outline History of the Russo-Japanese War, 1904, up to the Battle of Liao-Yang, with Questions and Answers (P. W.).
 A Short Account of the Russo-Japanese War ("Footslogger").
 An account of the Battle of Liao-Yang (with questions and 10 maps for examination purposes) (Bird).

9.—*The Palestine Campaign.*

- The Official History of the Great War—Military Operations in Egypt and Palestine, Vol. I, and Maps (Lt.-General Sir George MacMunn and Captain Cyril Falls).
 The Palestine Campaign (Colonel A. P. Wavell).
 An Outline of the Egyptian and Palestine Campaigns, 1914-18 (Major-General Sir M. G. E. Bowman-Manifold).
 Official History of Australia in the War, 1914-18, Vol. VII, Sinai and Palestine (H. S. Gullett).
 The Desert Campaign (W. T. Massey).

10.—*Organization of Army since 1868.*

A.—ORGANIZATION OF ARMY SINCE 1868.

History of British Army, by Fortescue, Vols. I to XI.

Outline of the Development of British Army, by Major-Genl. Sir W. H. Anderson.

Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

The annual Army Estimates of Effective and Non-Effective Services (H. M. Stationery Office.)

* Notes on the land forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1925.

The Statesman's Year Book.

Army List.

Articles in Newspapers and Magazines, viz., R. U. S. I.,

Army Quarterly, Journal of the U. S. I. of India, etc.

† Handbooks for the Indian Army—Sikhs. 1928.

11.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas, 1917).

The British Empire Series. (XII Volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

* Particularly recommended by the C. I. G. S. for all officers to read.

† Not to be removed from the library.

- Forty-one Years in India (Lord Roberts).
 History of the British Army (Sir John Fortescue).
 General Survey of the History of India. (Sir Verney Lovett).
 Citizenship in India (Capt. P. S. Cannon).
 India in 1926-27. (J. Coatman).
 India in 1927-28 (J. Coatman).
 India (Nations of to-day Series). (Sir Verney Lovett).
- B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.
- The Rise and Expansion of British Dominions in India (Sir A. C. Lyall, 1894).
 A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).
 The Nearer East (Hogarth, 1902).
 Modern Egypt (Cromer, 1908).
 Egypt and the Army (Elgood, 1924).
 The History of Canada (W. L. Grant).
 Nova Scotia (B. Wilson, 1911).
 Report on British North America (Sir C. P. Lucas).
 The Union of South Africa (R. H. Brand, 1909).
 Short History of Australia (E. Scot).
 History of the Australasian Colonies (Jenks, 1912).
 The English in the West Indies (J. A. Froude, 1888).
 The Lost Possessions of England (W. F. Lord, 1896).
 International Relations of the Chinese Empire (H. B. Mosse).
 (Kelly and Walsh, Shanghai).
 What's Wrong with China (Gilbert).
 Why China Sees Red (Putman-Weate).
 Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).
- 12.—*Military Geography.*
 Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).
 Imperial Military Geography (Capt. D. H. Cole, 1928).
 Introduction of Military Geography (Col. E. S. May).
 Imperial Defence (Col. E. S. May).
 Main Feature of the Japanese and other Pacific Problems.
 (Reprinted from *Morning Post*. Sifton Præd).
 Britain and the British Seas (H. J. Makinder, 1907).
 Military Geography (Macguire).
 Imperial Strategy (Repington).
 War and the Empire (H. Foster).
 Historical Geography of British Colonies (Dominions), 7 Vols.
 (Sir C. P. Lucas, 1906-17)—
 Vol. 1, Mediterranean.
 Vol. 2, West Indies.
 Vol. 3, West Africa.
 Vol. 4, South Africa.
 Vol. 5, Canada.
 Vol. 6, Australia.
 Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

13.—*Foreign Armies.*

OFFICIAL.

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- * Handbook of the Polish Army, 1927.
- * Handbook of the Army of the Kingdom of Serbs-Croats and Slovenes (Yugo-Slavia) 1927.
- * Handbook of the Czechoslovak Army, 1927.
- * Handbook of the Swiss Army, 1924.
- * Handbook of the German Army, 1928.

14.—*Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 500 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 509, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet black*. No washes or ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be Taken Away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered V. P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is now available. Price As. 8 plus postage As. 4.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. India in 1927-28 (Presented by the Superintendent, Central Publication Branch, Calcutta).	.. 1928.	J. Coatman.
2. All the World's Aircraft (Presented by Messrs. Sampson Low, Marston & Coy., Ltd., London).	.. 1928.	G. G. Grey.
3. The Annual Report of the Smithsonian Institution 1927..	1928.	
(Presented by the Smithsonian Institution, Washington).		

BOOKS PURCHASED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. The Daily Mail Year-book	.. 1929.	D. Williams.
2. India as I Knew it	.. 1926.	Sir Michael O'Dwyer.

BOOKS ON ORDER.

- | | |
|---|-----------------------|
| 1. The Official History of the .. | J. E. Ironside: |
| Great War Military Operations, | |
| France and Belgium, 1914. Vol. IV. | |
| 2. The Story of the North Sea Air Station | C. F. Snowden-Gamble. |
| 3. European Skyways .. | Thomas Lowell. |
| 4. Rulers of the Indian Ocean .. | Admiral Ballard. |
| 5. The Murmansk Venture .. | Major-Genl. Sir O. |
| | Maynard. |
| 6. The Dictionary of English History. | F. J. C. Hearnshaw. |
| 7. The History of Mysore .. | Wilkes. |
| 8. The Intimate Papers of Colonel House, | Seymour. |
| Vols. III & IV. | |

IX.—Pamphlets.

The following may be obtained by V. P. P., plus postage, on application to the Secretary :—

- (a) British and Indian Road Space Tables (separately), As. 12 each.
- (b) Diagram of Ammunition Supply (India), As. 4.

(Temporarily withdrawn)

- (c) Diagram showing New System of Maintenance in the Field at Home, As. 8.
- (d) Military Law Paper, Questions and Answers, As. 4. (As used at the A. H. Q. Staff College Course, 1926).

X.—Schemes.

The schemes in the Institution have been considerably increased and in order to simplify their issue they have been classified and numbered as follows :—

They can all be obtained by V. P. P., plus postage, on application to the Secretary.

(A) Administrative Exercise, with diagram (Reprinted May, 1928).

To illustrate the supply system of a Division (suitable for Staff College or Promotion) .. Rs. 2

(B) Mountain Warfare (Reprinted May, 1928).

(i) A scheme complete with map and solution .. ,, 5

(ii) Three Lectures on Mountain Warfare .. ,, 3

(C) New Staff College Series (Reprinted May, 1928). Complete with maps and solutions :—**(i) Approach March.**

Reconnaissance of night attack.

Orders for night attack Rs. 5

(ii) Outposts.

Defence.

Action of a Force Retiring ,, 5

(iii) Move by M. T.

Occupation of a defensive position.

Counter-attack ,, 5

(D) Promotion Series (Reprinted May, 1928). Complete with maps and solutions.**Lieutenant to Captain—**

(i) Mountain Warfare Rs. 5

(ii) Defence.

Attack orders ,, 5

Captain to Major—**(i) Outposts.**

(Temporarily withdrawn).

(ii) Tactical Exercise without troops.

Reconnaissance.

Attack orders ,, 5

(E) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War." As. 12.**(F) Copies of the recent (February 1928) Staff College Examination papers are available :—**

Strategy and Tactics Papers with Maps .. Rs. 2 each.

Other papers ,, 1 each.

(G) *Staff College Course Schemes (1928):—*

- (i) A set of three schemes, as given at the Army Headquarter Staff College Course, 1928, complete with maps and solutions, complete set .. Rs. 9

A limited number of the following papers are available :—

- | | |
|---|------------|
| (ii) Supply Problem (with map and answers) .. | Rs. 2 each |
| (iii) Military Law Paper (with answers) .. | As. 8 .. |
| (iv) Organization and Administration—Peace (with notes for replies) | 8 .. |
| (v) Precis of lecture on Organization and Administration | 8 .. |
| (vi) Hints on Working for the Examination and on tackling the Tactical Papers | 8 .. |
| (vii) Lecture on Military Law III—Precis .. | 8 .. |
| (viii) Precis of Lecture on Night Operations .. | 8 .. |
| (ix) Precis of Lecture on Bush Warfare .. | 4 .. |
| (x) Precis of Lecture on East Prussian Campaign, 1914—(I.—Battle of Tannenberg) .. | 8 .. |
| (xi) Precis of Lecture on East Prussian Campaign, 1914—(II.—The Battle of the Masurian Lakes ; and General Lessons) | 8 .. |
| (xii) Lecture on R. A. F. Organization and General Employment | 8 .. |
| (xiii) Lecture on R. A. F. Co-operation with the Army | 8 .. |
| (xiv) Precis of Lecture on the Employment of Cavalry with a Brigade of all Arms | 8 .. |
| (xv) Precis of Two Lectures on the Organization of the British Army | 8 .. |
| (xvi) Precis of Lecture on Ordnance Services with Special Reference to Movement on Transportation | 8 .. |
| (xvii) Precis of Lecture on the Dominion Forces .. | 8 .. |
| (xviii) Precis of Lecture on the Armoured Force .. | 8 .. |
| (xix) Precis of Lecture on the Auxiliary and Indian Territorial Forces | 8 .. |
| (xx) Precis of Lecture on the Artillery Organization .. | 8 .. |

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

XI.—Gold Medal Prize Essay Competition, 1929.

The Council has chosen the following alternative subjects for the Gold Medal Prize Essay for 1929 :—

(i) In future campaigns on the frontier we may encounter tribesmen, either equipped themselves with, or supported by other troops possessing modern artillery and aircraft. How can we best, both on the march and in bivouac, combine protective measures to safeguard ourselves against tribal tactics, as we have known them in the past, supported by such modern weapons,

or

(ii) Outline the best method of supplying a combined mechanised ground force and air force operating at a considerable distance (150—250 miles) from a railhead with no metalled road communications, no local mechanical or petrol facilities, and practically no local supplies except water.

The following are the conditions of the competition :—

(1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army and Royal Air Force or Auxiliary Forces, who are members of the U. S. I. of India.

(2) Essays must be printed or type-written and submitted in triplicate.

(3) When a reference is made to any work, the title of such work is to be quoted.

(4) Essays are to be strictly anonymous. Each must have a motto and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.

(5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1929.

(6) Essays will be submitted for adjudication to the three Judges chosen by the Council. The Judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution of the medal. The decisions of the three Judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.

(7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1929.

(8) All essays submitted are to become the property of the United Service Institution of India absolutely and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.

(9) Essays should not exceed 15 pages of the size and style of the Journal exclusive of any appendices, tables or maps.

By order of the Council.

J. G. SMYTH, MAJOR,

*Secretary, United Service Institution of
India.*

Simla, 1st April 1929.

Prize Essay Gold Medallists.

(With Rank of Officers at the date of the Essay).

- 1872..ROBERTS, Lieut.-Col. F. S., v.o., c.b., r.a.
 1873..COLQUHOUN, Capt. J. S., r.a.
 1874..COLQUHOUN, Capt. J. S., r.a.
 1879..ST. JOHN, Maj., O.B.C., r.e.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., r.e.
 1883..COLLEN, Maj. E. H. H., s.c.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry
 1888..MAUDE, Capt. F. N., r.e.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cavy. Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., r.e.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver Medal).
 1899..NEVILLE, Col. J. P. C., s.c.
 1900..THULLIER, Capt. H. F., r.e.
 LUBBOCK, Capt. G., r.e. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., d.s.o., Norfolk Regiment.
 BOND, Capt. R. F. G., r.e. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., d.s.o., r.f.a.
 1905..COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., r.a.
 1909..MOLYNEUX, Maj. E. M. J., d.s.o., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a Silver medal).
 1911..MR. D. PETRIE, m.a., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., d.s.o., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., m.v.o., Q.V.O. Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., v.d., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., r.f.a.
 1918..GOMPERTZ, Capt. A. V., m.c., r.e.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., d.s.o., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., d.s.o., o.b.e., r.f.a.
 1923..KEEN, Colonel F. S., d.s.o., i.a.
 1926..DENNYS, Major L. E., m.c., 4/12th Frontier Force Regiment.
 1927..HOGG, Major D. Mc. A., m.c., r.e.
 1928..FRANKS, Major K. F., d.s.o., 5th Royal Mahrattas.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* *N. B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (especially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894..O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909..MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(concl'd.).

- 1910..**SYKES**, Maj. M., c.m.g., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911..**LEACHMAN**, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..**PRITCHARD**, Capt. P. P. A., 83rd Wallahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..**ABBAY**, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..**BAILEY**, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..**WATERFIELD**, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..**ABDUR RAHMAN**, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917..**MIAN AFRAZ GUL**, Sepoy, Khyber Rifles.
- 1918..**NOEL**, Capt. E. W. C. (Political Department).
- 1919..**KEELING**, Lt.-Col. E. H., m.c., R.E.
ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920..**BLACKER**, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..**HOLT**, Major A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..**ABDUL SAMAD SHAH**, Capt., o.b.e., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..**BRUCE**, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department.
- 1924..**HAVILDAR RAHMAT SHAH**, N.-W. F. Corps.
NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..**SPEAR**, Captain C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..**HARVEY-KELLY**, Major C. H. G. H., d.s.o., 4/10th Baluch Regiment.
- 1927..**LAKE**, Major M. C., 4/4th Bombay Grenadiers.
- 1928..**BOWERMAN**, CAPTAIN J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMED KHAN, Havildar, Zhob Levy Corps.

The Journal

OF THE

United Service Institution of India.

Vol. LIX.

APRIL, 1929

No. 255.

EDITORIAL.

During the opening months of this year the attention of the Services in India, has, in the main, been focussed on the situation in Afghanistan. The severity of winter conditions has effectually prevented anything in the nature of major operations, but, with the coming of summer he would be a bold man who attempted to forecast future developments. There are, however, two outstanding features that are worthy of note. The policy of the Government in connection with Afghanistan is to preserve the very strictest neutrality. This has been authoritatively reiterated time after time, and our conduct of affairs in pursuance of this policy speaks for itself.

With the abdication of King Amanullah in January, and the prospect that the country was about to be plunged into Civil War, it was obvious that the position of our Legation at Kabul would become one of increasing difficulty. By the end of February, therefore, the Legation was withdrawn to India; Sir Francis Humphrys having then completed exactly seven years as British Minister to Afghanistan. His work, and more especially his skill in the conduct of affairs during the anxious and often dangerous period from December onwards have evoked well merited tributes. The safe return of the Legation was hailed throughout the Empire with a feeling of relief.

The second outstanding feature is the amazingly successful means by which the evacuations from Kabul were carried out. Extending over a period of just over two months, under weather conditions of the most extreme severity, the Royal Air Force evacuated approximately some 600 persons from Kabul to India. Not a single life was lost in the process. We live, it is true, in an age of records, but the

feat is without parallel. This is not the place to do more than note this really wonderful achievement, the detailed account of which has still to be written. The first congratulations to be received by the Royal Air Force were from the King, whose slow but successful restoration to health has been viewed with such heartfelt gratitude throughout the world.

* * * * *

The prospects of the coming General Election do not appear to have shaken the population at Home from the state of political apathy which is said to exist. We, in the Services, are not concerned with politics, our duty being to serve the Government that is in power. At the same time an Election has a sporting appeal to most of us, and it is interesting to read the Stock Exchange odds on the chances of the various parties. With an electorate of some 20,000,000, it would now appear to be more difficult than ever accurately to gauge the probable results. Writing of politics reminds us of the very real regret of the Army at the recent death of Mr. Stephen Walsh, Secretary of State for War, during the Labour Government of 1924. He was possessed of a most cheery and lovable disposition and was much liked by those who served him.

* * * * *

With the approach of April, Budget Estimates for the fighting services are now being published. At the time of going to press full details of the Army Estimates alone have been received. The salient features are that standing at £ 41½ million they show a reduction on last year of half-a-million sterling. There is a decrease of 1,500 in establishments, due to the smaller number of additional troops employed in China, the disbandment of the West African Regiment and the reduction of the Sierra Leone garrison, the mechanization of another Field Brigade Royal Artillery, the abolition of horse transport companies Royal Army Service Corps and economies resulting from the systematic examination of all establishments.

The strength of the Army Reserve on 1st April will be approximately 109,000, an increase of some 14,000 during the past year, and will rise by a further 15,000 during 1929, owing to the abnormally small numbers due to leave the Reserve during these two years.

The establishment of the Supplementary Reserve has been slightly increased to meet the minimum requirements in technical per-

sonnel of the Expeditionary Force as now organized. In 1928, recruitment did not reach expectations, and the strength of the Supplementary Reserve on 1st April 1929 will have fallen to about 14,000, but it is hoped that the special efforts to be made will bring the strength considerably nearer the establishment of 23,000.

The strength of the Territorial Army on 1st January 1929, was 6,932 officers and 132,444 other ranks, an increase of 108 officers and 121 other ranks as compared with 1st January 1928.

As from 1st April 1930, infantry battalions will be organized similarly to infantry battalions of the Regular Army, *viz.* Headquarter wing, one machine gun company and three rifle companies with a reduction in the establishment of each battalion of 52 men.

* * * * *

The recent Test Matches in Australia have brought credit both to ourselves and to the Australians. The latter, dogged at first by bad luck, rose superior to their difficulties, and after four defeats succeeded in winning the last match. Matches lasting as long as eight days would seem to require endurance rather than skill, and to many of us such long drawn out contests do not savour of the charm of cricket. On the other hand, to hope for a decision in three days was proved by the last Australian visit to be farcical. This fact has been recognised by the M. C. C., who have, for the next Australian visit to England, decided to allot four days to each match, with the added proviso that if at the end of the fourth match no decision as to the fate of the Ashes has been reached, the fifth game shall be played to a finish. The extension of time allotted to Test Matches will undoubtedly affect the issue of the County Championship, but it is gratifying to read that Counties have loyally agreed to release any men chosen to represent England.

* * * * *

As we go to press the announcement is made of the death of Marshal Foch. By his death the world has lost a great soldier and Britain a great friend. It was known that he had been in failing health for some months, and his end was therefore not unexpected, but the shock of his passing is none the less severe. Marshal Foch combined in his personality all the attributes for a first class military

leader. First, he had knowledge, attained by years of study of military problems. This knowledge he was able to impart, for he possessed clarity of thought and was lucid in expression. In addition, he was essentially a man of action with an indomitable will and great inflexibility of purpose. Finally, he possessed the happy knack of establishing cordial relations with his allies. The last words he uttered were "Now I am ready." They epitomize his personal courage. These few lines do not attempt to summarize the life of such a historical figure. They testify merely our admiration and affection for a very great gentleman.

* * * * *

A RE-DEFINITION OF STRATEGY.

By

CAPTAIN B. H. LIDDELL HART.

Since the Armistice of 1918 there has been an abundance of discussion and a fertile outpouring of views upon the tactics and organisation of armies. Further, while old shibboleths and methods have been demolished, serious and thoughtful attempts have been made to recast the foundations and to build upon them anew a structure of doctrine capable of weathering the storms of another war. The same vigorous renovation has been applied to the larger matter of war policy and the grand strategical combination of military, naval, air, economic and diplomatic action. But pure strategy has been curiously neglected in this discussion, apart from the question of the concrete means which invention and mechanical science have made available for its employment. The post-war housing scheme of military thought has embraced the larger offices and the workmen's dwellings but concerned itself little with the question of middle class habitations. Yet it would surely be unnatural if an upheaval so deep and far-reaching as the last war should leave strategical foundations untouched and suggest no possible improvements and developments in the structure of our strategical thought. Because of this gap, one is encouraged to attempt to draw up and put forward for consideration a fresh outline plan, which may at least serve as a basis and a beginning for discussion. Not essentially new, for anything based on historical experience cannot be truly new, it rather seeks to crystallise strategic thought more clearly and to re-define it afresh in the light of our enlarged experience and knowledge of psychology. Looking back now we see that strategy in the last two centuries has followed the inherent pendulum-like movement of most human concerns. In the 18th century it swung too far in the direction of curtailing risks, blood and battle, and in the 19th century, naturally, swung back to the other extreme. Can we now profit by the near-ruinous lesson of 1914-1918 to readjust and redistribute the balance of thought and if possible "centre" it at the happy mean?

The technical term "strategy" appeared in military literature early in the 18th century, and the prevailing conditions of warfare helped to give it the sense of its original Greek derivative, which literally meant "the art of the general," and even to narrow this sense. These conditions were the strength of fortification in comparison with artillery; the development of professional armies of more or less uniform cost, training and armament; the fact that wars were directed by shrewdly reasoning autocratic rulers and not by passion-swayed democracies; and the indivisibility of armies, which normally moved and fought as a single body, from which only temporary detachments were made for special missions and to hold strategic points, but not organized in permanently self-contained fractions.

These conditions tended to produce an equilibrium in the theatre of war, and on the battlefield, which easily settled into a stalemate unless upset by some ruse or stratagem on the part of one of the commanders. But the French Revolutionary and Napoleonic Wars brought about an enlargement of the meaning of "strategy"—at first called *stratégique* in French or "strategies" in English. The fractioning of the army into permanent divisions and Napoleon's development of this new organization, applied in his vast strategic manœuvres, caused a great acceleration and enlargement of operations. To regulate and co-ordinate the movements of a number of widely separated columns to a common end was a task which both enlarged the power of generalship and the demands made upon the general's attention. Hence this "logistical" meaning, that of directing the movements of an army, came to be added to the term strategy, and even to overshadow the older meaning. One effect, not a happy one, can be traced in the growing 19th century tendency for the idea of the application of force, as rapidly and concentratedly as possible, to obsess military thought and leadership to the undue neglect of the subtler art of surprise by ruse and stratagem.

But the term was to undergo still further expansion of meaning in the 19th century. Clausewitz, in his monumental work "On War" defined it as "the art of the employment of battles as a means to gain the object of the war. In other words, strategy forms the plan of the war, maps out the proposed course of the different campaigns which compose the war, and regulates the battles to be fought in each." This definition intruded on the sphere of policy, or the higher conduct of the war, which must necessarily be the responsibil-

ity of the government and not of the military leaders it employs as its agents in the executive control of operations. At the same time the definition narrowed the meaning of "strategy" to the pure utilization of battle, thus conveying the idea that battle was the only means to the strategical end. It was an easy step for his less profound disciples to confuse the means with the end and to reach the conclusion that in war every other interest and consideration should be subordinated to the aim of fighting a decisive battle.

To break down the distinction between strategy and policy would not matter much in cases where the two functions were combined in the same person, as with a Frederick or a Napoleon. But as such autocratic soldier-rulers have always been rare, and became extinct in the 19th century, the effect was insidiously harmful. For it encouraged soldiers to make the unworkable claim that policy should be subservient to their conduct of operations and it drew the statesman on to overstep the indefinite border of his sphere and interfere with his military employee in the actual use of his tools.

Moltke reached a clearer, and wiser, definition in terming strategy "the practical adaptation of the means placed at a general's disposal to the attainment of the object in view." This definition fixes the responsibility of a military commander to the government by which he is employed. His responsibility is that of expending most profitably to the interest of the higher war policy the force allotted to him within the theatre of operations assigned to him. If he considers that the force allotted is inadequate for the task indicated he is justified in pointing this out, and if his opinion is overruled he can refuse or resign the command, but he exceeds his rightful sphere if he attempts to dictate to the government what measure of force should be placed at his disposal.

On the other hand the government, which formulates war policy, and adapts it to conditions which often change as a war progresses, can rightly intervene in the strategy of a campaign not merely by replacing a commander in whom it has lost confidence but by modifying his object according to the needs of its war policy. While it should not interfere with him in the handling of his tools it should indicate clearly the nature of his task. Thus strategy has not necessarily the simple object of seeking to overthrow the enemy's military power. When a government appreciates that the enemy has the military

superiority either in general or in a particular theatre, it may wisely enjoin a strategy of limited aim. It may desire to wait until the balance of force can be changed by the intervention of allies or by the transfer of forces from another theatre. It may desire to wait, or even to limit its military effort permanently, while economic or naval action decides the issue. It may calculate that the overthrow of the enemy's military power is a task definitely beyond its capacity, or not worth the effort, and that the object of its war policy can be assured by seizing territory which it can either retain or use as bargaining counters when peace is negotiated. Such a policy has more support from history than military opinion recognizes and is less inherently a policy of weakness than its apologists imply. It is, indeed, bound up with the history of the British Empire and has repeatedly proved a life-buoy to Britain's allies and a permanent benefit to herself. However, unconsciously followed, there is ground for enquiry whether this unmilitary policy does not deserve to be accorded a place in the theory of the conduct of war.

But the more usual reason for adopting a strategy of limited aim is that of awaiting a change in the balance of force, a change often sought and achieved by draining the enemy's force, weakening him by pricks instead of risking blows. The essential condition of such a strategy is that the drain on him is disproportionately greater than on oneself. The object may be sought by raiding his supplies, by local attacks which annihilate or inflict disproportionate loss on parts of his force, by luring him into unprofitable attacks, by causing an excessively wide distribution of his force and, not least, by exhausting his moral and physical energy. Such a strategy is popularly called Fabian, after the illustrious Roman who thereby thwarted Hannibal's designs in Italy. More strictly it was a Fabian war policy, and this closer definition sheds light on the question, previously raised, of a general's independence in carrying out his own strategy inside his theatre of operations. For if the government has decided upon a Fabian war policy the general who, even within his strategic sphere, seeks to overthrow the enemy's military power may do more harm than good to the government's war policy. Usually a war policy of limited aim imposes a strategy of limited aim, and a decisive aim should only be adopted with the approval of the government which alone can decide whether it is "worth the candle."

We can now crystallise our thought into a shorter, simpler, and perhaps more exact definition of strategy as "the distribution and transmission of military means to fulfil the ends of policy." It is concerned not merely with the movements of armies, as its rôle is often defined, but with the effect. But when the application of the military instrument merges into actual fighting, the dispositions for and control of such direct action are termed "tactics."

The two categories, however, although convenient for discussion, can never be truly divided into separate compartments because each not only influences but merges into the other. Nor has clear thought been assisted by the attempts to subdivide into or to bridge the indefinite dividing line by fresh categorical definitions. First among these was the term "grand tactics," which came into use in the late 18th century to express the combination and movements of forces preparatory to and in readiness for, the battle. This term likewise has undergone changes of meaning, and is often employed to denote the plan upon which the application of military force, as distinct from other agencies, is to be based.

A term which fills a greater need, and is less productive of confusion, is that of "grand strategy." If practically synonymous with the policy which governs the conduct of war, as distinct from the permanent policy which formulates its object, the term "grand strategy" serves to bring out the sense of "policy in execution." For the rôle of grand strategy is to co-ordinate and direct all the resources of a nation towards the attainment of the political object of the war—the goal defined by national policy.

Pure Strategy.—Having cleared the ground, we can build up our conception of strategy on its original and true basis—that of "the art of the general." This depends for success, first and most, on a sound calculation and co-ordination of the end and the means. The end must be proportioned to the total means, and the means used in gaining each intermediate end which contributes to the ultimate must be proportioned to the value and needs of that intermediate end—whether it be to gain an objective or to fulfil a contributory purpose. An excess may be as harmful as a deficiency. A true adjustment would establish a perfect economy of force, in the deeper sense of that oft-distorted military term. But, because of the nature and uncertainty of war, an uncertainty aggravated by its unscientific study,

a true adjustment is beyond the power of military genius even and success lies in the closest approximation to truth. This relativity is inherent because however our knowledge of the science of war, at present an almost unexplored region, be extended, war is a science which depends on art for its application. Art can not only bring the end nearer to the means, but by giving a higher value to the means enable the end to be extended. This complicates calculation, because no man can exactly calculate the capacity of human genius and stupidity nor the incapacity of will.

Elements and Conditions.—Nevertheless in strategy calculation is simpler and a closer approximation to truth possible than in tactics. For in war the chief incalculable is the human will, which manifests itself in resistance, which in turn lies in the province of tactics. Strategy has not to overcome resistance, except from nature. Its purpose is to diminish the possibility of resistance, and it seeks to fulfil this purpose by exploiting the elements of movement and surprise. Movement lies in the physical sphere and depends on a calculation of the conditions of time, topography, and transport capacity. By transport capacity one implies both the means by which and the measure in which force can be both moved and maintained.

Surprise lies in the psychological sphere and depends on a calculation, far more difficult than in the physical sphere, of the manifold conditions, varying in each case, which are likely to affect the will of the opponent.

Although strategy may aim more at exploiting movement than at exploiting surprise, or conversely, yet the two elements react on each other. Movement generates surprise, and surprise gives impetus to movement. For a movement which is accelerated or changes its direction inevitably carries with it a degree of surprise, even though it be unconcealed; while surprise smoothes the path of movement by hindering the enemy's counter-measures and counter-movements. As regards the relation of strategy to tactics, while in execution the borderline is often shadowy, and it is difficult to decide exactly where a strategical movement ends and a tactical movement begins, yet in conception the two are distinct. Tactics lies in and fills the province of fighting. Strategy not only stops on the frontier, but has for its purpose the reduction of fighting, to the slenderest possible proportions.

Aim of Strategy.—This statement may be disputed by those who conceive the destruction of the enemy's armed forces as the only sound

aim in war, who hold that the only goal of strategy is battle, and who are obsessed with the Clausewitzian saying that "blood is the price of victory." Yet if one should concede this point and meet its advocates on their own ground, the statement would remain unshaken. For even if a decisive battle be the only goal, all recognise that the object of strategy is to bring about this battle under the most advantageous circumstances. And the more advantageous the circumstances, the less proportionately will be the fighting.

The perfection of strategy would therefore be to produce a decision—the destruction of the enemy's armed forces through their unarming by surrender—without any fighting. History provides examples where strategy, helped by favourable conditions, has practically produced such a result. Cæsar's Ilerda campaign was one, Cromwell's Preston campaign another, while in recent times there have been the operations which culminated at Sedan in 1870 and between Galilee and the hills of Samaria in 1918.

It rests normally with the government, responsible for the grand strategy of a war, to decide whether strategy should make its contribution by achieving a military decision or otherwise. And just as the military is but one of the means to the end of grand strategy—one of the instruments in the surgeon's case—so battle is but one of the means to the end of strategy. If the conditions are suitable, it is usually the quickest in effect, but if the conditions are unfavourable it is folly to use it.

Let us assume that a strategist is empowered to seek a military decision. His responsibility is to seek it under the most advantageous circumstances in order to produce the most profitable result. Hence his true aim is not so much to seek battle as to seek a strategic situation so advantageous that if it does not of itself produce the decision its continuation by a battle is guaranteed to do so. In other words dislocation is the aim of strategy; its sequel may either be the enemy's dissolution or his disruption in battle. Dissolution may involve some partial measure of fighting but this has not the character of a battle. Famous examples, beyond those already quoted from history include Hannibal at Trasimene, Turenne's last campaign in Alsace, and Napoleon's Ulm campaign. Among clear cases where disruption was an inevitable sequel to the strategic advantage previously gained one may instance Scipio's campaign of Ilipa, Cromwell's of Worcester, Napoleon's of Jena, Grant's of Vicksburg.

Action of Strategy.—How is the strategic dislocation produced ? In the physical, or “logistical,” sphere it is the result of a move which (a) upsets the enemy’s dispositions and by compelling a sudden “change of front” dislocates the distribution and organisation of his forces ; (b) separates his forces ; (c) endangers his supplies ; (d) menaces the route or routes by which he could retreat in case of need and re-establish himself in his base or homeland. A dislocation may be produced by one of these effects but is more often the consequence of several. Differentiation, indeed, is difficult because a move directed towards the enemy’s rear tends to combine these effects. Their respective influence, however, varies and has varied throughout history according to the size of armies and their complexity of the organisation. With armies which “live on the country,” drawing their supplies locally by plunder or requisition, the line of communication has negligible importance. Even in a higher stage of development, a small force has less dependence on the line of communication and enables supplies to be transported with it for limited periods. The larger an army and the more complex its organization the more prompt and serious in effect is a menace to its line of communication.

Where armies have not been so dependent, strategy has been correspondingly handicapped, and the tactical issue of battle has played a greater part. Nevertheless, even thus handicapped, strategic artists have frequently gained a decisive advantage previous to battle by menacing the enemy’s line of retreat, the equilibrium of his dispositions, or his local supplies.

To be effective such a menace must usually be applied at a point closer, in time and space, to the enemy’s army than a menace to his communications, and thus in early warfare it is often difficult to distinguish between strategical and tactical manœuvre.

In the psychological sphere, dislocation is the result of the impression on the commander’s mind of the physical effects which we have listed. The impression is strongly accentuated if his realization of being at a disadvantage is sudden, and if he feels that he is unable to counter the enemy’s move. Psychological dislocation, indeed, fundamentally springs from the sense of being trapped. This is the reason why it has most frequently followed a physical move onto the enemy’s rear. An army, like a man, cannot properly defend its back from a blow without turning round to use its arms in the new direction.

"Turning" temporarily unbalances an army as it does a man, and with the former the period of instability is inevitably much longer. In consequence, the brain is much more sensitive to any menace to its back. In contrast, to move directly on an opponent is to consolidate his equilibrium, physical and psychological, and by consolidating it to augment his resisting power. In war as in wrestling the attempt to throw the opponent without loosening his foothold and balance tends to self-exhaustion, increasing in disproportionate ratio to the effective strain imposed upon him. Because of this disproportion, which increases as the effort advances, victory by such a method can only be attainable if the assailant possesses a great margin of strength. Even so, it tends to lose decisiveness, for in the case of an army it rolls the enemy back towards their reserves, supplies, and reinforcements, so that as the original front is worn thin new layers are added to the back. And, at best, it imposes a strain rather than producing a jar.

Thus a move round the enemy's front against his rear has the aim not only of avoiding resistance on its way but in its issue. In the profoundest sense, it takes the line of least resistance. The equivalent in the psychological sphere is the line of least expectation. They are the two faces of the same coin, and to appreciate this is to widen our understanding of strategy. For if we merely take what obviously appears the line of least resistance, its obviousness will appeal to the opponent also and this line may no longer be that of least resistance. In studying the physical aspect we must never lose sight of the psychological, and only when both are combined is the strategy truly an indirect approach, calculated to dislocate the opponent's equilibrium.

For example, Hannibal in 217 B. C. took the line of least resistance and least expectation by moving into Etruria through the marshes and onto the rear of the Roman army encamped at Arretium.

But, after ravaging the country, he then moved straight on, and by thus appearing to ignore contemptuously this Roman army impelled the consul Flaminius, far more strongly than by any threat to his rear or supplies, to rush precipitately on Hannibal's heels and into the deadly ambush at Lake Trasimene.

Again, Schlieffen, framing the German plan for 1914, sought a logistical indirect approach by sweeping through Belgium with a massive right wing. But the real subtlety of his plan was not on his

right but on his left, which he made so weak that any French offensive in Lorraine would push it back. And the further it was pushed back, the further would the French be committed in this direction and the more would their rear be exposed to the sweep of his right wing through Belgium. Like a neck their communications would be stretched out to receive the falling axe. The plan was shrewdly based on an insight into the French temperament and their new doctrine of the headlong offensive. Indeed, in the event, the French "head" was laid blindfold on the block. But unfortunately for Germany, Schlieffen's successor, Moltke, failed to grasp his conception, and, fearing the weakness of the left wing, so strengthened this as to counteract its essential purpose. While the French rushed to fall into the trap, Moltke rushed German troops to save them. An irony of history.

Thus we see that the mere fact of marching indirectly towards the enemy and onto the rear of his dispositions does not constitute a strategic indirect approach. Strategic art is not so simple. Such an approach may start by being indirect in relation to the enemy's front, but by the very directness of its progress towards his rear may allow him to change his dispositions so that it soon becomes a direct approach to his new front.

Because of the risk that the enemy may achieve such a change of front, it is usual, and usually necessary for the dislocating move to be preceded by a move or moves, which can perhaps best be classified under the term "distract" in its literal sense of "to draw asunder." The purpose of this "distraction" is to deprive the enemy of his freedom of action, and it should operate in both the physical and psychological spheres. In the physical, by causing a distension of his forces or their diversion to unprofitable ends, so that they are too widely distributed and too committed elsewhere to have the power of interfering with one's own decisively intended move. In the psychological sphere, the same effect is sought by playing upon the fears of, and by deceiving the opposing command. "Stonewall" Jackson realized this when he framed his strategical motto—"Mystify, mislead, and surprise." For to mystify and to mislead constitutes "distraction" and surprise is the essential cause of "dislocation." And it is through the "distraction" of the commander's mind that the distraction of his forces follows. The loss of his freedom of action is the sequel to the loss of his freedom of conception.

Realizing how the psychological permeates and dominates the physical sphere, we begin to see what Napoleon meant by his famous dictum that "the moral is to the physical as three to one." This realization warns us, too, of the fallacy and shallowness of attempting to analyze and theorize about strategy in terms of mathematics. To treat it quantitatively, as if the issue turned merely on a superior concentration of force at a selected place is as faulty as to treat it geometrically as a question of lines and angles. Yet voluminous works have been devoted to a "compartmented" analysis of strategy under such headings as "the relation between the fronts of opposing armies and their respective lines of communication with their base." "Case of both armies forming on a front parallel to the line of communication with the base," and so on.

A prolonged abstract analysis of psychological strategy would be wearisome without being helpful, for it is only possible to probe into the mind of a commander through the medium of historical examples. But such study of military history should be directed mainly to discover the commander's thoughts and impressions and the decisions which sprang from them. To explore all the details of the fighting is unnecessary, valueless and even misleading. For it matters little what the situation actually was at any particular point or moment; all that matters is what the commander thought it was. Weapons and conditions change so much in each generation that anything but the broadest survey of battles and movements is not only unprofitable but liable to fill the student's head with masses of historical lumber to the exclusion of thought. Human nature, however changes, but slowly, if at all, and human nature under stress of danger, not at all.

Military history to be of practical value should be a study of the psychological reactions of the commanders, with merely a background of events to throw their thoughts, impressions and decisions into clear relief. The supreme value of Henderson as compared with Hamley was that he focussed attention on the commander's psychology instead of on his geometry, that he let us into his mind instead of merely showing us his limbs working. But even Henderson's "Stonewall" Jackson would have been just as valuable and its lessons more easily assimilated if it had been in one short volume instead of two long ones, besides avoiding the accurate but immaterial criticism that its facts and details were often inaccurate.

What of the future ? Here we pass from the broad construction of a frame for strategic thought to the question of its application. Without drawing any hard and fast deductions, one may indicate certain impressions derived from a study of past and present tendencies.

Reflection suggests, and history confirms, that a direct approach is the worst of all military "risks"—worse than the passage of mountains, deserts or swamps, worse than that of cutting oneself loose from one's supplies or of operating with inferior force. Natural hazards, however formidable, are inherently less dangerous and uncertain than fighting hazards. For all conditions are more calculable, all obstacles more surmountable than those of human resistance. By reasoned calculation and preparation they can be overcome almost "to time-table."

It was Clausewitz who, reacting against the "geometrical" interpretation of Napoleon's strategy, laid down that "the independent will-power of his opponent" is the least calculable and most formidable of the factors with which a commander has to deal. But his line of thought and teaching led him to place excessive emphasis on force applied through the bodies of a commander's troops as the means of damaging the commander's will. It is curious that he should have neglected the heightened power and speed of impressions made immediately on the opposing commander's mind, in favour of impressions made through a "third party" channel. But the teaching of Clausewitz was directed more to fortify the will of the commander on his own side than to undermine the will of the opposing commander. And he was a cultivator of expectancy, rather than an exponent of the unexpected.

The historical significance of his tendency is great, for on his doctrine was formed the minds of Moltke and the generation of 1870, and indirectly through them, as well as directly, its influence was widened during the interval between 1870 and 1914. Indeed, the plan on which the French went to war in 1914 was the spiritual heirloom of Clausewitz.

Hence, force overshadowed surprise and mobility on the strategical horizon of the 19th and early 20th centuries. Hence the relative neglect not only of psychological surprise but of new inventions which might contribute to it. So also with mobility—rate of movement was treated as an invariable factor. In staff rides and exercises, calculations and plans were based on "normal" times, and little research was made

into the advantages of unexpected acceleration by new means or by a partial sacrifice of strength and convenience. In contrast to Napoleonic practice, undue stress was laid on the importance of bringing a force entire to its destination—tying it to the pace of its slowest elements. Equally neglected was the lesson contained in Napoleon's *marche de manœuvre*—guns and trains upon the road, infantry and cavalry moving across country. Even since the World War, although the strategic value of tanks and the newer forms of transport lies as much or more in their power of cross-country movement as in their speed, the strategic advantages of such movement are rarely applied or realized. This failure of comprehension is perhaps the less surprising when, in studying the history of the past hundred years, we see the failure of strategists to grasp the idea underlying Napoleon's use of the divisional system. By 1870 the intervals had become much narrower and by 1914 armies were back in the old solid block, with the divisions rubbing shoulders in a long, inflexible, unmanœuvrable, line. Yet all the time the increasing range of weapons had progressively diminished the risk and increased the profit of leaving intervals—of a calculated distribution of force for a concentrated purpose. For the divisional organization was by its nature a fresh aid to the strategy of indirect approach, whose psychological purpose may be epitomized in the one word "trap." The varied forms of the indirect approach are to be seen in the campaigns of the Great Captain's but such a historical survey serves to show that even in past experience its effect has most often been produced—the trap baited—by a military move directed against an economic target the sources of supply of the opposing state or army. The future is likely to strengthen this experience, for national conditions and the development of civilization are bringing new influences to bear on strategy and opening to strategy new channels of influence. These were foreshadowed in the American Civil War.

For, with the growth of democracy the war-will of the opposing power has become more diffused and more sensitive. And with the growth of social organization, of means of communication, and of the interdependence of districts, the economic target has proportionately outgrown the military target. Just as strategy gained increased power, in comparison with tactics, when armies become dependent on lines of communication for their supply, so it has gained a further increase, and widened its scope, through the dependence of nations on

“lines of communication.” The concentration of a modern nation’s food supplies, as also now of its water, light and heat supplies ; the complex web of its commerce and industry ; the sense and fact of the interdependence of its centres of population—all combine to afford a wider sphere of influence and new ways of influencing the enemy’s will.

To overthrow the enemy’s armed forces may still be the quickest and most effectual way to cause the collapse of the enemy nation’s will to resist. But the new civil conditions provide a far stronger argument against attempting it unless the military conditions are highly favourable to its success. The civil conditions give the strategist not only an alternative channel of action but an additional lever towards his military aims. By threatening economic objectives he may be able both to distract and dislocate the enemy’s military dispositions, while the greater frequency and sensitiveness of such civil objectives may give him opportunities to slip past the military shield and strike at them with decisive results. This potential development of strategy is greatly favoured by the advent of the air weapon, which introduces a third dimension of movement, and thus incalculably enlarges the scope for surprise.

THE NEW ORGANIZATION.

By

CAPTAIN B. C. FLETCHER, M. C.

Being a discussion of the tactical employment of a battalion organized to consist of a headquarters wing, including a group of four anti-tank weapons (heavy machine guns), three infantry companies and one machine gun company of four sections of four guns each.

* * * * *

Co-operation and the New Organization.

The new organization is a distinct step towards co-operation. It will be evidently easier in war for machine and anti-tank gunners to co-operate with the infantry they have served and trained with in peace, than with any troops they may happen to have been brigaded with ; and, since higher commanders can plan for all their machine and anti-tank guns, this additional co-operation within the unit does not prevent co-ordination within the formation.

The Attack.

The method of attack by an infantry battalion remains practically the same. In the early stages of the attack one company might perform the duties of forward companies (I. T., 1926, Vol. II, Section 13, para. 8), while two companies would do this when the objective was more definitely located. The great volume of modern machine gun and rifle fire forces dispersion upon attacking troops, so that there is no need to reduce frontages to correspond with the reduction in the number of bayonets in the battalion. Infiltration by sections, co-operating in an advance towards a common objective, is frequently the only means by which infantry can approach enemy defences by daylight. Bayonet assaults are only possible over the shortest distances, while it is generally preferable to crawl into positions from which small arms fire can be poured into the defence. Attacks over open ground by successive lines of men in extended order were the resource, during the war, of commanders of partially trained troops ; they may also be necessary when there has been a loss of morale, but they should not be used by commanders of well-trained troops ; they are

wasteful. Everything therefore points to there being no reducing the offensive power of a battalion, for the fire-power has been increased, and fire action will take a greater share than before in the attack.

The Machine Guns in the Attack.

The machine guns would be distributed as described in I. T. 1926, Vol. II, Sec. 14, but owing to their increased number probably one sub-section of two guns would move in immediate support of the two leading companies. They would be succeeded by two more guns which would move forward as soon as the two leading guns had taken up a position. Forward and supporting guns would thus be continually changing rôles. In cases where it was necessary to develop a great volume of fire to cover the initial advance, all guns could be concentrated to fire in co-ordination with the artillery barrage, until the first objectives had been seized. Guns would then be reorganized in depth, some moving forward and becoming forward guns, some moving into support, and some remaining in reserve.

The Anti-Tank Guns in the Attack.

It will depend on circumstances whether the anti-tank guns will be used in depth or distributed over the whole frontage. One thing is certain, they must be well forward, for it is there that the infantry want them. Nothing can be more demoralizing than to advance against an enemy known to have tanks with no apparent means of resisting them. The mere presence of the anti-tank guns will be heartening. They should be in the vicinity of the rear platoons of the leading companies, but it will not always be possible for them to move over the same ground, nor as quickly, as infantry. The anti-tank guns will have to abandon their transport, whatever it may be, when the light automatics abandon theirs. Man-handling these guns will be a slow business, but so is any advance in the face of the enemy. Forward sections will be crawling along under cover, trying to find positions from which to enfilade enemy posts; junior leaders will be reconnoitring; some sections will call a halt to collect ammunition, and some because they are not anxious to go on; there are a thousand and one causes, moral and material, which make an advance slow, and this delay will give the anti-tank guns time to get up into position in support of the foremost troops. Their arrival may only coincide with the arrival of fresh sections, who by their impetus may carry forward the attack. This means that the constant protective and consolidating

rôle of the anti-tank guns has been temporarily postponed. The attack will halt somewhere, and the sooner the arrival of the anti-tank guns the better.

Further Considerations.

A bullet striking a metal surface from an oblique angle is very liable to ricochet without penetrating. This points to the desirability of firing either head-on, or square-on from a flank, into a tank. Two anti-tank guns, placed centrally, say 300 yards, in rear of the leading companies of a battalion in an attack could be effective only against tanks approaching the inside platoons of those companies. Were the tanks to attack the leading flank platoons, the anti-tank guns would only be able to intervene when the tanks reached their level, obviously too late. In order to cover the entire frontage, the anti-tank guns must be organized and trained to fight singly. Where a battalion in the attack has one or both of its flanks exposed, four guns will be insufficient to protect the forward companies and the reserve.

The Reserve.

Generally speaking, the reserve will not now contain such a large proportion of the personnel of the battalion as in the past. Its rôle remains the same, but it has become more precious. A common movement on manœuvres has been for the two rear companies of a battalion attacking in square formation to close up on the forward companies, as soon as the latter appear to be held up, in order, possibly, to impress the umpires with the great volume of fire-power built up by the attack. Fortunately human nature is more cautious on service and, without orders from the battalion commander, rear companies would hesitate to join the forward companies. With only one company in the reserve, the occasions when a battalion commander will order his reserve to thicken up the attack become rarer, for where two companies have been held up, it will be unwise for one company to follow. The battalion commander must make a definite plan for the employment of his reserve. Sites must be found from which effective fire can be brought to bear on enemy posts, and the fire from these sites must come as a surprise to the enemy who is already engaging the forward companies. Gradually, as the enemy's fire is neutralized, it will become possible for individual sections to move forward to more and more favourable positions. Just as in the defence two or three determined machine gun posts may hold up for a time a set-piece attack, so, in the attack, it will be necessary for two or three sections

only to obtain favourable fire positions in order to enable the remainder to continue the advance with little loss. The attack will now be quickened up. To allow reorganization, the reserve company may take over the duties of the forward companies.

Defence.

So far as a battalion commander is concerned the line of the foremost defended localities in front of which the attack is to be stopped will be the localities held by his forward company or companies. Two forward companies will be the normal distribution, with one company and a proportion of the machine guns in reserve. The rôle of the forward companies does not require discussion—we may pass on to the reserve.

The Reserve in Defence.

The battalion reserve will have :—

- i. Posts prepared for defence, and,
- ii. An assembly position from which a counter-attack can be launched.

It will generally be possible to foresee the line of advance which the enemy's troops will be forced to follow if they succeed in penetrating the foremost localities, it should therefore be possible to punish him heavily by directing the remaining fire-power of the battalion onto these troops ; already disorganized by the confusion of the modern battlefield, and to do so more heavily than by launching a counter-attack with the reserve company, across ground which is probably being shelled by one side or the other. Supposing the forward companies of several battalions to have been over-run by the enemy, there remains in rear a line of single companies, closely supported by machine guns and under the immediate control of battalion headquarters ; this line should be amply strong enough to force the enemy to employ fresh troops if he wishes to continue the advance. It would be a great mistake for battalion commanders to launch their reserve companies in separate unco-ordinated attacks ; the principles of co-operation and concentration are the two which are obviously disregarded by such action. If it is considered that ground vital to the conduct of the battle has been lost, the brigade or divisional reserve should be employed. The reserve companies will form a line behind which this reserve may deploy. Vital ground must, of course, be recaptured, but ground for ground's sake on no account. It must be remembered that the more irregular the defensive line becomes, the more difficulty

will the enemy experience in finding a suitable forming-up area, and in co-ordinating the fire of his various arms, for a further advance. We see, therefore, that defence, rather than counter-attack, will be the rôle of the battalion reserve.

The Machine Guns in Defence.

The various ways in which machine guns can be organized are given in I. T. Vol. II. Sec. 3 para. 17. There is no need to modify this paragraph, but the number of machine guns in a brigade has been increased, and since the machine gun is a particularly effective weapon of defence, the power of defence of the brigade may be considered to have been increased. There is no reason, now, why a portion of the machine guns of the forward battalions should not be left in the hands of their battalion commanders, while the remainder come under brigade or divisional control. This would give higher commanders a greater number of guns to co-ordinate with the artillery plan, while leaving the forward guns with battalion commanders.

Normal Distribution of M. G.'s in Defence.

The distribution of machine guns in defence will naturally vary according to circumstances. The following distribution may, however, be regarded as normal :—

- i. One sub-section of two guns supporting each of the two forward companies from a maximum distance of 500 yards. These guns would remain silent until an enemy attack was launched.
- ii. Two sections of four guns with the dual rôle of firing overhead fire in front of the foremost defences, and, should the enemy succeed in penetrating the defensive system, direct fire in support of the reserve company.
- iii. One section of four guns in reserve. These guns may also be used at night for harassing fire from special positions, but they will normally remain silent until an enemy attack has been launched; when they will fire in conjunction with the artillery plan. The number of machine guns whose fire can be co-ordinated with the artillery plan will partly depend on the time available for the organization of the defence. (There certainly never seems to be much time for this on manoeuvres). The reserve guns may be in such depth that they are unable to fire in support of the foremost defences.

The Anti-tank Machine guns in the Defence.

The duty of the anti-tank machine guns will be to destroy the enemy tanks in front of the line of defended localities in front of which the attack is to be stopped. They must therefore be sited to fire direct fire from the positions held by the forward companies. As it will seldom be possible to find one or two central positions covering the whole front, they must be organized to fire as single guns, and to divide the frontage between them. Depth must be sacrificed for four reasons :—

- i. There are only four guns to cover the entire frontage, anything up to 1,500 yards.
- ii. The enemy tanks must be destroyed before they overrun the front sections.
- iii. The morale of the forward companies will suffer if they do not feel that the anti-tank guns are with them.
- iv. For the protection of reserve companies and battalion headquarters there will be the anti-tank guns of the artillery.

Outposts.

Outposts have two duties :—

- i. Observation, and
- ii. Resistance.

An outpost position must, therefore, have a certain depth, which will normally consist of :—

- i. An observation line of well concealed sentry groups, supported by a chain of small posts.
- ii. A series of defended posts and localities affording each other mutual support.

These are the words of F. S. R. when speaking of the forward zone in position warfare, and are less confusing than the expressions “piquets” “supports,” and “reserves”.

A battalion allotted a sector of the outpost position would normally divide the frontage between two companies, from each of which, three platoons would find the defended posts and one platoon would supply the sentry groups and observation posts. The less imminent an enemy attack, the further afield would the observation posts be sent; by night they would be replaced by a few listening posts close to the defended posts and on the main lines of approach.

There will be one company in reserve, whose rôle will be that of a reserve company in defence; that is to say, it may be used for a local counter-attack, or to defend a definite position. In the latter, and more usual case, its defended posts will form part of the outpost position, but will be in rear of those held by the forward companies, and across the approaches to the position to be held by the main body.

The machine guns also will be distributed as in defence, but depth may have to be sacrificed, in which case there will probably be forward guns and reserve guns only. The forward guns will cover the approaches to the outpost position, but the reserve guns, whatever may be their rôle in defence of the outpost position, must be able to fire direct fire on the lines of approach to the main position.

Since outposts are required to resist for a certain length of time only, frontages may be increased. The sixteen machine guns will enable a battalion to offer considerable resistance over an extended front, for which the four anti-tank guns will not be adequate. Artillery will, therefore, be required to supplement the anti-tank defence in the outpost position. Anti-tank guns will be sited to cover suitable tank country, and it must be borne in mind that the first contact with an enemy will probably be with his armoured cars. Observation posts cannot be expected to fight these, and they will have done their duty if the enemy's every movement is reported.

Battle Outposts.

In battle outposts the conditions are different. It will be necessary to move the anti-tank guns up into the immediate support of the leading infantry, and to organize the position for defence. Frontages will not be so great, and the machine guns will be organized in greater depth.

The Advanced Guard.

One section of four guns will normally be detailed to accompany the vanguard of one company. The officer commanding the machine gun company, or his representative, will also ride with the vanguard, in order to obtain early information of the enemy, and to select positions to be taken up by the remaining three sections.

Conclusions.

If any of the conclusions of this essay require underlining, they are that :—

- i. The anti-tank guns must form part of the foremost defences, and must be prepared to fight as single guns.
- ii. In the attack, full use must be made of the fire-power of the battalion, more particularly, in the use of the battalion reserve.
- iii. In defence, the battalion reserve will normally form part of a reserve area of defended localities, which the enemy must attack if he wishes to continue the advance, and behind which the brigade or divisional reserve may deploy for a counter-attack.
- iv. At least one anti-tank weapon must accompany the leading infantry in an advanced guard.

PROPAGANDA : ITS THEORY AND PRACTICE.

By

CAPTAIN A. L. PEMBERTON, M.C., R. A.

Definitions, I think, are often overdone in military writings, but in this particular case to start with a definition seems essential. Propaganda is still new enough to be practically unknown to many, while there must be many more whose ideas on the subject have not yet crystallized into any very coherent form.

Mr. Lasswell* has given us a very clear picture of his conception of propaganda, which may well serve as a basis for discussion. "The problem of maintaining morale," he says, "is only in part a problem of propaganda, because propaganda is but one of the many devices which must be relied upon.... By propaganda is not meant the control of mental states by changing such objective conditions as the supply of cigarettes or the chemical composition of food. Propaganda does not even include the stiffening of morale by a cool and confident bearing. It refers solely to the control of opinion by significant symbols.....stories, rumours, reports, pictures, etc."

He further regards it as one of the three chief implements of operation against a belligerent enemy, of which, the other two, are military and economic pressure; and its mode of operation he describes as the direct use of the mental force of suggestion.

As a next step, therefore, we must try a further clarification of our ideas on the subject of suggestion. What is the medium through which this force works, and what is the manner of its operation?

To both of these questions psychology can, I think, supply a simple and easily workable answer. Simple, that is, to anyone who possesses an elementary knowledge of modern psychological theory. Unfortunately, notwithstanding the excellent precept laid down in our Training and Manœuvre Regulations, a military education does not guarantee any such knowledge. It may be advisable, therefore, to make certain that the reader is in possession of the necessary facts.

One need not be a psychologist now-a-days to have heard of the Unconscious Mind. We may not all know it by this name. Some, for example, prefer to call it the Sub-conscious. But the name is of

* See Propaganda Technique in the World War, by Harold D. Lasswell, pp. 8, 9.

no importance so long as we agree that there is a portion of our mind which is capable of acting independently of consciousness.

Let us take an example. Most of us have seen a man walking down a crowded street with his nose glued to a newspaper, and have admired the skill with which he manages to avoid collisions with the passing pedestrians. Consciously, it is apparent, his attention is fixed upon the paper he is reading. Moreover he is often quite unaware of the objects he is passing. Therefore some power other than consciousness must be directing his footsteps. And, if we followed his career carefully, we might notice that as his attention began to wander from his newspaper, his movements became more halting. Something might suddenly catch his eye, he might look up to find a stranger bearing down upon him, and then an agonizing *pas-de-deux* would almost certainly follow to mark the returning control of consciousness.

The Unconscious Mind, therefore, is not only capable of propelling the human machine. It can on occasion control the machine with greater skill than Consciousness; and this is really what we mean when we talk of the unerringness of instinct.

In short, the Unconscious Mind has intelligence, and if we require further proof of this fact, we can find it amongst the phenomena of dreams. Most of us, no doubt, would be loath to accept our dreams as evidence of the standard of our mentality. They are as a rule mere chaotic nonsense, or, if coherent, extremely childish. But cases have been recorded where tunes have been composed, poems have been written, and even difficult mathematical problems have been solved by persons while dreaming.

Lastly, the Unconscious Mind has will power. For if it has not, how can one account for the extraordinary power and pertinacity of bad habits? There is hardly anyone who is not the victim of some kind of bad habit, however mild it may be, and it would be foolish to argue that we all deliberately court the displeasure, or the ridicule, of our fellows.

This much is common knowledge. But some psychologists are now of the opinion that the Unconscious Mind is, in fact, the sole source of the motive power that drives the human machine. It is the power-house and the store-house, *i.e.*, the seat of memory of the mind. It is, therefore, the medium through which the force of suggestion operates.

The next point to consider is how the mechanism of suggestion works. It is well known that a note emitted from a tuning fork will be picked up by other tuning forks in the vicinity, provided that they are attuned to the same note. The same phenomenon is experienced in 'wireless' reception, and in other less well known physical processes. It is, in fact, characteristic of the transmission of physical energy, and it has been labelled 'resonance' by physicists.

Well, suggestion is to all appearances a kind of mental resonance. It is not the only kind, for imitation and sympathy act in precisely the same way at the lower levels of intellectual development. And the principle is that an individual will only react to the influence of another individual with whom he is in tune. For example, a child will imitate most readily the actions of its parents, a man will sympathize most keenly with his loved ones, and a crowd will accept almost without criticism the suggestions of its leaders.

This latter is what is known as 'prestige' suggestion, and it occupies a sort of mid-way position between 'mass' suggestion, which is closely akin to imitation and sympathy in its action, and auto-suggestion, which operates only at the highest intellectual levels and is dependent for its utility upon a well organized 'master sentiment' and a strong character.

In all three cases, however, it is the imagination through which the force of suggestion takes effect. There is an old saying that what the eye cannot see the mind cannot grasp, and this is just as true of suggestion as it is of imitation and sympathy. It is much easier for us to sympathize with someone whose distress is visible than with someone of whose discomfiture we have only heard or read. So it is much easier for us to accept, and put into practice, an idea which has been presented to us in pictorial form, than one which has been conveyed in speech or writing.

One more point remains to be noted. For some reason, which we need not attempt to explain here, the majority of human beings are much more susceptible to evil than to good suggestions. For example, if a friend meets me in the street and says "By Jove, old chap, you are looking ill!", my pulse perceptibly slackens and a feeling of depression begins to steal over me. If, on the other hand, when I am feeling a bit out of sorts, some one informs me brightly how well I am looking, I do not get anything like a commensurate feeling of elation. And psychologists say that most others react in the same way.

This is not an important principle like those I have dealt with in the preceding paragraphs, but I mention it because it has had a marked effect on the past history of propaganda.

We are now in a position to enunciate certain axioms of propaganda as follows:—

(i) The enemy psychology must be known, so that our line of attack may be carefully chosen in accordance with his predominant unconscious impulses.

No one ought to appreciate this fact better than we soldiers, who are continually harping upon the importance of the moral factors in war; yet one cannot help suspecting that it is not always accorded its full significance. War has in the past been a rather isolated business, and this has led to the development of certain traditions which are not quite in keeping with the rest of public opinion. As a result, the soldier may sometimes find himself hopelessly at sea in dealing with propaganda problems amongst a civilian population. For example, at the beginning of the Great War the German authorities, who were almost completely under the spell of these military traditions, made several misguided attempts to rouse the feelings of Americans on their side by spreading tales of sniping by Belgian civilians. Unfortunately for them, however, the Americans, being animated largely by civilian ideals, could feel nothing but sympathy for the poor Belgians whose lands had been laid waste, and would not admit the sanctity of the military uniform. Technically, of course, the Germans were quite correct for international law does forbid the indiscriminate use of firearms by civilians; but laws were made for the control, and not for the understanding, of human nature. At all events we have the authority of Mr. Lasswell, * who is himself an American, for stating that the result of this particular German propaganda was exactly the reverse of what had been expected. And, if space permitted, I could quote several other examples to show how ineffective the military propagandist may be, if set to work among a people whose psychology he has not studied.

(ii) The appeal must be made to the imagination, and the emotions, rather than to the intellect.

(iii) Propaganda must be well balanced, *i.e.*, the enemy must not be pressed too far or he will be driven into the antagonism of despair.

*See "Propaganda Technique in the World War," p. 197.

This axiom depends upon a principle of unconscious mental action which I have not previously mentioned. It is this. The most important elements in the mechanism of the Unconscious Mind are the instincts, impulses, or tendencies—call them what you will—which have now been fairly thoroughly investigated by psychologists, and concerning which certain ‘laws’ have been evolved. That which is of most interest to us at the moment, may, for want of a better term, be called the law of reversibility of the instincts. Interchangeability would perhaps be a more correct word to use, but it is not so expressive as reversibility, and I have, therefore, chosen the latter.

An example or two will illustrate best what I mean. A fox, on hearing the cry of the pack, will immediately react to the impulse to avoid danger and will seek safety in concealment or flight. If driven out into the open, however, and hunted to a standstill, it will in despair turn at bay and attack its pursuers. That is, the impulse to avoid danger, will, in the last resort, give place to the impulse to fight. In the words of the old tag, even the worm will turn.

Similarly the timidest of animals may put up a bold fight in defence of its young, and curiosity may often overcome the first years of the unknown. In psychological parlance, the impulse to avoid danger may on occasion be displaced by the impulse to protect the weak or the impulse to investigate.

From our present point of view the first of these examples is the most important, and it will explain how it is that a demoralised enemy, if offered no reasonable terms of surrender will turn again in a frenzy of despair and fight to the last man and the last penny.

(iv) Truthfulness is essential.

The reason for this does not lie in any moral obligation, but in the simple fact that truth will out, and that a lie once revealed will reduce the effectiveness of all subsequent propaganda. Even innocent exaggeration may be dangerous, as was shown in the Great War by the general distrust of German propaganda produced by the exuberant optimism of their early communiques and the gradual disillusionment which followed.

(v) Conflicting arguments must be avoided.

This axiom is an obvious corollary to the last, but its application is somewhat different. In modern wars, where the whole efforts of

a nation, or even of a group of nations, are required to achieve victory, it becomes of the greatest importance to ensure a proper co-ordination between the propaganda policy of the various government departments, and of the various Allied governments.

Before dealing with the technique of propaganda, it is well to observe that there are really two types of propaganda, negative and positive. Of these the former is concerned with breaking down the enemy's, the latter with building up our own, will to victory.

Positive propaganda did not come into much prominence during the Great War, partly perhaps because of man's greater susceptibility to evil suggestions, already referred to, and partly for the same reason that the defensive has always followed the offensive in physical warfare. Until one has actually been struck by a new weapon it is not easy to devise defensive measures, and even if it were easy, we seldom have either the resources or the inclination to protect ourselves in advance against dangers which are only hypothetical.

Now that we have had experience of the offensive use of propaganda, however, the development of the antidote is only a matter of time. And positive propaganda has this advantage over negative propaganda, that it can be applied as realistically in peace as in war. Legally, as far as I know, there is no reason why negative propaganda should not be actively employed in peace time ; just as there is no legal reason why our artillery should not be provided with living targets at their practice camps. But in neither case would it be a politic thing to do. It is quite true, of course, that many political manœuvres are accompanied by a species of negative propaganda, but such manœuvres are now generally deprecated by the best elements in politics. In international relations, in peace, it has been almost universally forsworn, and the recent ostracism of the Soviet Government may be traced in large measure to its defiance of this convention.

In the near future, therefore, we may expect some striking developments in the art of positive propaganda, and these are almost certain to take the form of educating the public. One of the most potent causes of a decline in morale is the state of anxiety produced by a feeling of uncertainty, and this is explained psychologically by saying that the greatest of all fears is the fear of the unknown. Obviously, therefore, the most effective means of sustaining morale is to eliminate, as far as possible, the unknown. This can be done by

discussing beforehand the realities of war, not hysterically, as is sometimes done in the Press, but sanely, and with the object of letting our potential soldiers know exactly what they may have to face.

Much has been written lately of the horrors of an aerial bombardment on a modern scale, and this has in most cases been done quite frankly with the intention of frightening those who are still feeling aggressive into a less bellicose attitude towards the existing state of affairs. This is a rather primitive way of dealing with the difficulty, however, and is almost on a par with the silly bogey stories invented by ignorant nursemaids for subduing refractory children. It is difficult to see why the impulse to fight should suddenly quit the human psyche, and so long as it remains we have got to be prepared to deal with occasional military upheavals. It is the duty of positive propaganda, therefore, to steer a middle course between brutal aggressiveness on the one side and pacifist idealism on the other, and to ensure that, if war does come, the nation will meet it in a spirit of calm determination, based on a sure knowledge of the dangers it will have to endure, and, more important still, the steps that have been taken by the Government to preserve it from those dangers.

Now for a few words on the technique of propaganda ; and let us take positive propaganda first. The object, it will be remembered, is to build up the national will to victory, or, in other words, to arouse and maintain the warlike spirit in the nation. As Mr. Lasswell has pointed out, there are some people in every nation who offer easy material to the propagandist. " Men with uncongenial spouses, wives with uncongenial husbands, youths with suppressed ambition, elderly men with their boredom and faint yearnings for adventure, childless women and some wifeless men, the discredited ones who pine for a fresh deal in the game of life ; all, and many more, find peace from mental fight in the intoxication of life in one historical hour and for one historic goal." *

On the other hand the contented ones, who, one hopes, form the majority in any nation, will not be so easily roused into action, and the main body of public opinion, therefore, will require some stimulation. In the light of what has been written above it is obvious that this stimulation must come through the impulses, or instincts, which form the bedrock of the Unconscious Mind. We should, therefore,

*See " Propaganda Technique in the World War," p. 58.

know something about these instincts, and their relative importance in the mental make-up of the various nationalities.

I will not attempt an exhaustive list, but will confine myself to two simple examples. The impulse to protect the weak is admitted by all psychologists, and is also generally recognized as being very prominent in the British people. President Lincoln made good use of this fact when, in September 1862, he issued his Emancipation Proclamation and thus weaned the minds of the English cotton hands from contemplation of the losses they were suffering and filled them with a lofty sympathy for the slaves, for whose liberation the North were now avowedly fighting.

Again the German invasion of Belgium in 1914 did much to bring our country united into the war on the side of France, and as the propaganda value of this kind of material was recognised, there grew up a war aim for the liberation of oppressed peoples, by which was meant at first no more than Belgium, Alsace and Lorraine, but which was gradually extended to cover the nationalities in the Austro-Hungarian Empire and the Poles in Germany. Then the Germans themselves took up the idea and said that they, too, were fighting to liberate the oppressed, by which they meant, of course, Ireland, Egypt and India.

The impulse to assert oneself is another which is fairly well established among psychologists, and which is worth a little consideration here. The supposed utility of this impulse is to enable the young human being to acquire self-consciousness, and thus to discriminate between what it can control and what it cannot control. It is, therefore, particularly prominent in young people and young nations, and it is, incidentally, also prominent among Germans. Many will remember the bombastic talk about German Kultur that was so prevalent in 1914, and Dr. Karl Lamprecht, criticizing his fellow countrymen about the same time, said that when the war came, everyone who could write obtained the largest possible goose quill and wrote to all his foreign friends, telling them that they did not realise what splendid fellows the Germans were. "Probably much more harm came to our cause in this way," he said, "than from all the efforts of the enemy.. The self-confidence was superb, but the knowledge was lacking."

To British propagandists this impulse is not of such direct value, but it has an important indirect effect owing to the interaction of the moral factors. Obviously no people would willingly plunge into all

the horrors of modern war without first satisfying itself that its cause was just, and as a corollary to this it must believe that the enemy's cause is unjust. Belittling the enemy, therefore, plays an important part in the maintenance of our own self-esteem, and if we have any qualms at all about the rectitude of our position, it becomes all the more necessary to prove that the enemy is in the wrong. If in addition we can select a particular individual on the other side as a target on which to concentrate the animosity of our nationals, and especially if this individual can be easily caricatured, then the effect is still further enhanced. For example, in the Great War the personality of the Kaiser became the focal point of some of the most effective of the Allies' propaganda, and ultimately led to a somewhat farcical situation when the discussion of peace terms began. The Allied Governments, having consistently harped upon his supposed responsibility for the war, felt themselves bound to demand the surrender of his person, in order that he might be tried as an international criminal, and they were only saved from the ridiculous consequences of such a demand by the firm refusal of the Dutch Government to give him up.

Between this distorted form of positive propaganda and true negative propaganda there is a great gulf fixed, which is not always clearly realized. However much it may help to raise our own self-esteem, the mere hurling of abuse is not likely to depreciate the enemy's morale. I have already referred to the unlikelihood of any nation rushing into a modern war unless it firmly believed itself to be in the right, and in such a frame of mind it will be excited, rather than depressed, by the use of anathema. The days of papal bulls, and such-like clumsy weapons, are now over, and the present-day propagandist has need of much greater subtlety, if he is to be successful. The human mind is, alas, as we have seen, only too susceptible to evil suggestions, but they require to be worked in lightly with a paint brush, not to be driven in with the force of a sledge hammer. And the principle is to try and convince the enemy, not that he is fighting in a bad cause, but that, right or wrong, he lacks the ability to win.

This may sound immoral, but one cannot overemphasize the fact that propaganda is not directly concerned with questions of morals. Morals are just some of the props, by the aid of which human nature has helped itself along the road of evolution. Propaganda goes straight

for the fundamental forces that lie beneath, and is only interested in the props in so far as they enable it to drive the machine in the required direction.

Whether the 'will to power' is, as Adler would have us believe, the fundamental motive underlying all human behaviour, is perhaps still open to question, but there can be no doubt that it is of immense significance in determining our conduct, and there is still a great deal of truth in the old saying that might is right.

Ludendorff put this idea very naively in his 'War Memories.' "We fought the world," he wrote, "and we could fight the world with a good conscience so long as our 'moral' was high." The good conscience, in other words depended on the high morale, and the latter, we may suspect, was connected very intimately with their belief in their ability to win.

The need for subtlety in this kind of propaganda arises out of the difficulty of clothing hostile suggestions in a garb of friendliness, so that the critical faculties may be evaded and the anxiety states, to which all of us are subject in some degree or other, may be artificially stimulated.

There are several brilliant examples of this in Sir Campbell Stuart's book, "Secrets of Crewe House". Thus in 1918 a series of London Letters was sent to Swiss and Scandinavian papers purporting to be written with a pro German flavour, but containing, under this disguise, a true picture of food and other conditions in Great Britain. These were reprinted in many German papers and the facts contained therein were contrasted with the much worse conditions which prevailed in Germany.

Again, a trench newspaper was prepared in a style which exactly resembled a German publication, even to a head of the Kaiser in the title decoration. One-quarter to one-half a million copies of this paper were distributed weekly, and provided the German soldier with excellent reading matter which was calculated to appeal to him, while at the same time revealing facts hitherto carefully hidden from him.

From what has been said above it follows that the best means of dissemination of propaganda is that which makes the most powerful and most direct appeal to the imagination. Ludendorff, as usual, has made some acute observations on this point. He wrote:—* "The transmission of news from mouth to mouth is the best, because

*See "My War Memories, 1914-1918," by Gen. Ludendorff, p. 381.

it is the most dangerous means of propaganda. The idea is planted, and no man knows whence it came." And again :—" Pictures and films, and illustrations in poster form, strike home more and produce greater effects than writing, and thus have a greater influence on the masses."

The use of newspapers has already been mentioned, and other methods employed by us during the Great War were leaflets, fired from trench mortars or dropped from aeroplanes or balloons, or distributed from secret agencies in hostile territory, and books issued under false covers. For example, what outwardly appeared to be an innocent copy of the works of Schiller might in reality contain propaganda literature of the most destructive kind.

Lastly, a few words about propaganda personnel and the system of control. The British practice during the Great War was for everyone to take a hand. Diplomats, soldiers, sailors and journalists, all became involved, and it is not easy to say which of them performed the task most skilfully. Mr. Lasswell, however, has noted the growth, since the war, of a class of professional propagandists, and he hints that it is they who will form the great majority of our propaganda personnel in the future.

But whatever the source of recruitment, it is essential that the director of propaganda should be a man whose prestige is at least equal to that of the minister, or ministers, who control the policy of the government. For, to quote Ludendorff again, propaganda must "act as peacemaker to policy and mould public opinion without appearing to do so."*

Unity of control is, for this and other reasons, essential, and it is in this direction that our war practice seems to be most capable of improvement. After a long and intricate series of changes, and many weary months of bickering and duplication, a working unity was actually achieved between several autonomous departments which dealt with home, empire, neutral, allied and enemy propaganda. In our then state of knowledge such a system was probably justified by the extraordinary diversity of foreign interests to which we were appealing, but if we are to have real efficiency in the future a single organization is almost indispensable.

* See " My War Memories, 1914-1918," by Gen. Ludendorff, p. 379.

At present, I believe, it is the intention that the Foreign Office should have the supreme control, but that advisers should be attached to it from the other government departments concerned. In that case the responsibility of the soldier will be confined to technical advice on matters of detail such as the maintenance of the proper degree of secrecy in connection with 'orders of battle,' etc., and to the dissemination of propaganda material within the battle zone.

On the other hand it must be remembered that the soldier is becoming to an ever increasing degree the servant of the nation, and that his decisions in the field must often be affected by the state of the morale on the 'Home Front'. It is important, therefore, that he should study the principles of this new weapon of propaganda, in order that he may be able to read the situation aright when next his decision has to be made.

“DECLINE OF THE OFFENSIVE SPIRIT IN THE INFANTRY”

By

“AN INFANTRY SOLDIER.”

The heading to this article is not intended to imply that the offensive spirit is dead in infantry units of our Army, but to bring to notice the fact that our present teaching has a distinct tendency to lessen and to destroy it. Now-a-days in training, in pamphlets which are issued for consumption and in training discussions which are held, stress is invariably laid upon the difficulty of advancing against an enemy armed with machine guns.

Infantry officers who have read the report on a recent Staff Conference at Home cannot fail to have been impressed by the attitude, bordering on the defeatist, adopted with regard to the use of forward machine guns in the attack by most speakers, who stressed the physical impossibility of getting machine guns forward in battle except in armoured motor vehicles. In India, where no such vehicles exist, or are likely to exist for some time to come, these sentiments are not very cheerful reading for the infantry soldier. No doubt it is well to look ahead and to seek the ideal solution, the provision of which may necessitate the spread of some previous propaganda, but it is wrong teaching to over-emphasise the impossibility of forward movement.

When Colonel Fuller wrote his “Reformation of War” he did not really believe that the wars of the future could only be won by soldiers encased in motor-propelled, amphibious, gas-proof steel boxes, though that was the impression he left on the mind of the casual reader. It was merely his picturesque method of drawing attention to the possibilities and advantages of mechanisation. Likewise, undue pessimism in our conferences, the reports of which are widely circulated, about the difficulties ahead of us is bound to give the wrong impression to some extent to infantry soldiers. That some infantry officers *are* influenced was clearly shown at a recent Senior Officers’ Conference in India when an infantry brigadier—himself an infantryman—got up and made the astounding statement that in his opinion the rôle of infantry in future wars would be the purely passive one of holding defensive positions, while cavalry and armoured cars attacked by encircling movements.

Umpiring at manœuvres, if too strictly enforced, also tends to break the offensive spirit and leads to the belief that whatever happens and however skilful a use is made of ground, it is no use pushing forward as the infantry are bound to be held up by the umpires. Pictures are often painted in far too lurid colours and seldom allow of the troops held up being able to make any ground by a show of tactical skill.

That infantry, without adequate covering fire, cannot advance across the open in daylight against unlocated enemy machine guns is an undoubted fact, but what about night attacks and "the witching hour of dawn"?

Movement by night is now-a-days generally recognised and practised, but how often do we see a night attack carried out? And yet such attacks will surely be a feature of the next war.

Pessimists are even inclined to depreciate any sort of movement by night on the grounds that modern flares dropped from aeroplanes will make undetected movement at night impossible, but do such pessimists clearly visualise the "fog of war" and the great part played in war by the element of surprise?

The answer to this question is an emphatic "NO."

Even the dawn attack appears to have slumped of recent years, although this operation has succeeded times without number in the past and will succeed equally well in the future—of that there is no shadow of doubt.

And yet, on manœuvres, every obstacle is often put in the way of a commander to mitigate against the success of such an operation and troops are often held up long before they actually would be in war.

This hour of dawn, when it is still too dark for the enemy to see to shoot and yet light enough to allow the infantry to advance at a rapid pace, is the P. B. I.'s opportunity and he should be trained to believe in it. To break his faith in it by holding him up prematurely, as is often done, in order to produce a premeditated situation or a "set-piece" battle for the morrow is wrong.

In Northern India about two years ago a most realistic dawn attack, which was afterwards judged by the director to be an unqualified success, succeeded only because the two battalions who played the chief part in it managed to dodge the umpires, who had been instructed to hold it up in the initial stages.

Other causes for the decline of the offensive spirit are to be found in the catchword "fire and movement" and in the fact that teaching in the use of the rifle and the bayonet are carried out in the same school of instruction.

This "fire and movement" business has led to a renewal of the pre-war custom of troops advancing in the attack by small and futile rushes, which can achieve nothing and which were proved to be of no value in actual fighting during the war. It is submitted that this catch-word has been almost universally misinterpreted.

To enable troops to advance in daylight, covering fire from guns, M. Gs. etc., must be arranged for, but once this has been done it is up to the infantry to advance with all possible speed on to their objectives. Troops on the move under fire can usually be kept on the move, but unnecessary halting or hesitation may, and usually does, destroy the momentum of the attack. It is on these lines, therefore, that training is obviously required. As regards the teaching in rifle and bayonet, here we meet another catch-word—*viz.*, "weapon training" the introduction of which coincided with the teaching of all infantry weapons at the same school of instruction. In this connection it is noteworthy that this applies to infantry weapons only and no attempt is made to teach the use of the lance or sword at the Small Arms School. The result is that, as can only be expected, nine-tenths of the instruction is put into the power and use of the bullet and that the bayonet, which is the real weapon of offence and the weapon which is, and always will be, the deciding factor in war, takes a very secondary place. The effect of such training on the infantry soldier is very marked and is leading more and more to an instinctive tendency, when in doubt, to stop and fire rather than to push on with a view to getting in with the bayonet.

To leave bullets and the various means of ejecting them to the pundits at the Small Arms School and to entrust the bayonet once more to the pugilists at the P. T. School would probably do much to discourage the belief that the rifle is merely a gas-pipe for spouting bullets and not first and foremost (in the attack) a bayonet carrier with which to win battles.

In conclusion, as an infantry soldier I wish to stress once more the necessity for reviving—or rather encouraging—the offensive spirit in the P. B. I., rather than discouraging it as is done at present. Let

us not "go off the deep end" about the machine, but remember that it is the man we have to train, man who is very human and is easily influenced by pessimistic forebodings. Rather than sitting with folded hands and making a bogey of enemy machine guns and fire-power, let us train our men to believe that they can advance, if not by day, yet most certainly by night and by dawn.

They did so in the last war against overwhelming odds and they will do so equally gallantly in the next, provided that the offensive spirit is not killed within them in the meanwhile.

ARMY NOMENCLATURE.

By

“SIMPLICITAS.”

Old customs and figures of speech die hard, and all that savours of change is viewed with mistrust and dislike.

It is doubtless owing to this predilection for the old-established sonorous and well-rounded phrases—possibly a relic of the times when literature was a cultivated art—that we owe many of these wonderful expressions which adorn the Army nomenclature of to-day.

It is generally agreed that many of these exaggerated words and expressions could be replaced by others, simpler and shorter, but the old words have always been used, and, therefore, must be used. No consideration of practical utility is allowed to influence the question of their retention in our daily vocabulary.

That they are clumsy, difficult to spell, and, taken collectively, consume many hours of valuable time in spelling out in signal messages, matters not.

Let us consider a few words and expressions taken haphazard during the course of an ordinary morning's work and see if we cannot suggest something shorter and simpler of equal meaning.

Take, for instance, that universal word “proceed.” No one ever “goes” anywhere in the Army—we always “proceed.” Why? And yet “go” only contains 2 letters against the 7 letters in “proceed,” *i.e.*, one extra unnecessary word for the signallers.

Then, again, we have the word “reconnoitre,” a word of French origin like so many of our Army terms. It is a long word, difficult to pronounce, and still more difficult to spell, but we prefer it to the far simpler word “search,” which really has the same meaning. Consider the sentence:—‘You will proceed to A. and reconnoitre the wood at B.’

Why not put it in plain English, and write:—

“You will go to A. and search the wood at B.”

We should have a simpler sentence, and effect a saving of 10 letters, or the equivalent of 2 words.

We now come to a remarkable expression "In the vicinity of," dear to adjutants and such-like when drawing up orders for sentries. "He will take charge of government property in the vicinity of his post."

Why must we use this long cumbersome expression instead of the neat little English word "near"? Why can't the wretched sentry be told to take charge of government property "near" his post? It means the same thing, yet no adjutant, worthy of the name, would condescend to use it. That he could thereby discard 3 unnecessary words leaves him unmoved.

There is a terrible word, dear to brigade majors and writers of operation orders, which ought to be discarded from our vocabulary. I mean the word "synchronize."

"Watches will be synchronized at 1100 hours."

What he really means to say is that watches will be "set," but he is not going to make use of a simple word like "set" when he can overawe us with such a word as synchronize, in spite of the fact that he would thereby save the use of 8 letters, or $1\frac{1}{2}$ words for the signallers.

For sheer clumsiness it would be hard to beat that truly appalling expression "An anticipatory fire order."

No one outside a lunatic asylum or the musketry school can pronounce it, or wants to pronounce it.

An-ti-ci-pa-to-ry. What a word! And yet we are asked in cold blood to use it in our everyday work in the field. Before any fire unit commander could even pronounce it, the opportunity for using it would have passed.

What does it mean? It means that the men are to fire at a target which you anticipate will appear, and they are to wait until it does appear before firing.

Would not a "waiting fire order" be simpler?

While on the subject of fire orders, we notice another expression beloved by the weapon training expert, i.e., "a prominent object," used for directing the fire of a fire unit. The actual object indicated may be neither "prominent," nor even an "object" such as for instance, the dividing line between grass and plough, or a bend in a road. In fact, the wise commander will avoid giving "prominent objects" as his aiming marks, such as chimneys, trees, etc., as he knows that they are liable to destruction.

It is suggested that the word "landmark" would be more suitable.

There is a word which is in frequent use, whose actual meaning is vague and uncertain. It is "forthwith." The dictionary tells us that it means "immediately" or "at once." This, however, is hardly the army meaning of the word. Without being able to define exactly what it *does* mean, it seems to convey the sense of a possible delay, or rather, a meaning less peremptory than "at once". Anyhow its meaning is vague and ill-defined. If the writer means "at once" or "as soon as possible" he should say what he means.

"By way of" is a common expression, needlessly long and clumsy, when we have that useful little Latin word "*via*" which means the same thing, and saves 2 words for the signallers. It is in universal use in our time tables, and is understood by everybody.

Consider the following terrific sentence:—

"You will proceed forthwith to A. by way of B. and halt at the well in the vicinity of the village where watches will be synchronized."

We might lighten the load of our unfortunate signallers, and save considerable time by writing the message thus:—

"Go at once to A. *via* B. and halt at the well near the village where watches will be set."

20 words instead of 26, and short words instead of long ones.

There are many other words and expressions, such as "armoured fighting vehicles" and "appreciation of the situation," for which a little ingenuity might substitute something less elaborate. It is time we realised that essays in classical English are not essential for writing orders and messages. We learn that the wording should be clear, concise and precise, and that all unnecessary words should be eliminated, and yet, we approve of such redundant phrases as those quoted above.

We may proceed to advancement by way of application, but for Heaven's sake let us go to our objective by the shortest way.

GREAT BRITAIN AND THE CHANNEL TUNNEL.

By

MAJOR T. J. PONTING, M. C.

Introduction.

Without examining details of construction, let us assume that the Channel tunnel is an accomplished fact or an accepted project.

Let us assume, also, that the motive power is electricity, and that an international agreement regarding the military uses to which this tunnel may be put in war, and concerning the maintenance of its integrity at all times, has been signed by all the Great Powers.

Assuming all this, what are the advantages and/or disadvantages of a channel tunnel in being.

To view these from a proper perspective it will be necessary to examine, individually, the three main factors of international life likely to be affected, namely, Economic, Political and Strategic, and from the results of this examination try to draw some definite conclusions.

Economic Advantages and Disadvantages.

The existence of a channel tunnel will, in the first place, and especially in its early years while the novelty lasts, undoubtedly increase the present volume of passenger traffic between Great Britain and the Continent; the journey would by such means not only be simplified but speedier and at little extra cost to the passenger.

It is, however, conceded that such claims were, in part at least, put forward at a time when a regular air service across the channel was being established, but expectations have only partially been fulfilled.

The reasons for this are not difficult to find. Air travel is still more expensive than first class rail travel, while it still entails an element of greater risk.

To wealthy men and to large business houses neither of these disadvantages is an actual bar; to the less wealthy and more nervous—and from these the great bulk of the travelling public is drawn—such factors are distinct obstacles, since the small saving in time seldom justifies the financial or nervous expenditure.

It is from this bulk of the travelling public that the extra flow for the channel tunnel can be expected ; since, the quicker and more convenient travel becomes, the more frequent are journeys likely to be made.

To this, also, must be added an increase in tourist traffic as a result of ameliorated conditions.

Trans-Atlantic traffic, to a great degree now terminates at French ports, and from this, as a result of the tunnel, a diversion may be anticipated.

To some, no doubt, such a contingency may be viewed with disfavour, nevertheless, any such diversion has, at least, its economic compensations.

From the revenue earning point of view the mere increase in passenger traffic outlined above would not justify the construction of the tunnel, since freight, and not passenger traffic, is the life-blood of a railway system.

The arguments, that the more frequent journeys, which ameliorated conditions of travel are likely to induce, will result in a greater flow of trade to and from the continent, do not bear examination.

The British business houses of to-day employ neither nervous old men nor aged ladies for their important continental work ; and if more trade is waiting for such houses—as their arguments in favour of the channel tunnel would suggest—and if trade is depressed, as they would have us believe, it would appear that the demand for a more luxurious mode of travel to gain that trade is hardly a convincing contention in favour of the tunnel, and merely reflects on the stamina of their representatives.

The increased flow of tourist traffic would undoubtedly tend to benefit trade, but unfortunately the benefit is more likely to reach the continent than Great Britain, since the nature of the British peoples being, as it undoubtedly is, more venturesome than that of their Gallic and other continental neighbours, there will merely be a greater flow from Great Britain. So far then as passenger traffic is concerned little or no advantage appears likely to accrue from the construction of the channel tunnel ; it is therefore necessary to examine the prospects of commercial commodities and ascertain whether the transfer of any continental traffic from the normal sea routes to the tunnel route offers any economic advantage.

It is an accepted fact that despite the cost of handling, and always provided that time is no object, it is far cheaper to send goods from, say, Liverpool to London by coastal steamer, than to convey them direct by rail ; in other words rail freights are too high.

This fact may equally apply to continental trade now carried in coastal shipping.

Coastal shipping can serve all areas of the Continent ; it is merely a question of deciding upon the port most economically situated for the discharge of a particular cargo.

The Channel tunnel, on the other hand, can only serve one limited area without involving long rail hauls which will undoubtedly be uneconomical in comparison with the existing system.

Moreover, on the British side of the channel there are difficulties still graver to be contended with ; the actual area in Great Britain from which the tunnel must commence its descent below the Straits of Dover has even now grave traffic problems to contend with.

London is the distributive centre for the food supplies of the London area and for the whole of the south and south-east England ; distributive congestion already exists and an overflow actually travels by road.

At the present time the proportion of manufactured articles emanating from the London area and the quantity of raw materials arriving at the port of London as the outcome of continental trade is relatively small ; if, however, we were to superimpose a stream of continental goods traffic on this already congested area, it would ultimately be necessary to reconstruct and extend the existing railway systems in order to exploit the channel tunnel to its fullest commercial capacity.

The expenditure involved in such a scheme of reconstruction cannot be faced by the great British railway companies in this present period of financial depression unless and until it can be proved that there definitely will be such a volume of traffic by this route that rail freight charges can be reduced to a sea-borne level and still show a reasonable return on the initial capital expenditure.

The next point for consideration, therefore, is what commodities, and in what volume, can be transferred from the sea routes to the tunnel route.

The great bulk of the present cross-channel goods traffic consists of perishable goods; by means of the tunnel route there could undoubtedly be an increased flow in this type of trade as a result of a quicker delivery and less damage consequent on reduced handling in transit.

Nevertheless, any such increase has very definite limitations, both as regards supply and demand, while perishable goods being chiefly imports, an increase would have an adverse effect not only on exchange but also on an already depressed British agricultural market.

Even, however, were the maximum increase in imports of perishable goods, for which a sale could be found, to be permitted, this alone could not make the channel tunnel a paying proposition; something more than this is required. Whence that something more is to come is the problem.

For the sake of argument let us assume that that 'something more' has been found; what is the result? Let us suppose, for example, that it has been found possible to export coal by the tunnel route at slightly cheaper rates than can be done at present by coastal shipping; and, in consequence, we are better able to compete on the continental market.

Should we derive any economical benefit from this diversion? Before examining this question it is necessary to touch briefly on what are likely to be the traffic conditions of the channel tunnel.

It is not visualized that the tunnel will be constructed to hold more than two lines of traffic, one each way, or the cost would be prohibitive.

The length of the tunnel, after allowing for the necessary gradients from inland to the under-sea portion, will not be less than 36 miles.

For lack of space for loops and sidings it will be necessary to work the traffic through the tunnel as one block or section of the route, which means that a second train cannot enter that section until the train preceding it is clear of the section altogether.

High speeds through the tunnel, especially in the early years of its existence, will be inexpedient and therefore it may be estimated that the passage of the 36 miles of tunnel by a single train travelling in either direction will take not less than 50 minutes or 28-29 trains per diem.

If we compute passenger and perishable goods traffic on the present day scale only we require not less than 15 trains per diem, while if we add a 25 % increase to both these classes of traffic we require 18-19 trains per diem ; this leaves us a balance of 10 only for our coal, which, after taking into consideration railway maintenance requirements and possible axle limitations permissible on such a section of railway, gives us freight for 8,000 to 10,000 tons of coal per diem.

This in itself is not only an inadequate return upon the capital expenditure involved but will incur definite repercussions elsewhere.

Every ton of coal, or, for that matter, any commodity now sea-borne, diverted through the channel tunnel, immediately lays up a ton of shipping ; we may improve the coal industry but we cripple a certain section of our shipping and ship-building industry ; in other words we rob Peter to pay Paul and Peter is already on the verge of bankruptcy.

Economically this is unsound ; we can afford to cripple none of our great industries for the benefit of another, and least of all can we afford to cripple that which is our greatest heritage—or even the most humble section of it—our sea-power, to which we owe our world position and our Empire.

(*Note*—The military aspect of the effect on shipping is discussed later in the paper).

There is moreover one other point for consideration in connection with this possible diversion of traffic.

The greater the volume of traffic diverted to the all-rail route the greater will be the benefit to the continental railways, while there is no corresponding loss in shipping.

With aspects such as these in view the project of the channel tunnel appears to offer no real commercial benefit to Great Britain, nor, as far as can be ascertained from careful reading and from discussions, have any such claims been indisputably established.

The greater facilities for travel to the continent claimed for the channel tunnel are merely the shortening of the time involved by the journey, by, at the most, three hours—customs and other formalities will still be essential—and the avoidance of an hour's sea passage which, admittedly, is frequently unpleasant.

The tunnel must of necessity be State property—no one would dare to suggest that it should ever be in the hands of an international combine. Is there any justification for such State expenditure on such an unproductive project, while national prosperity is still beyond the horizon, and while there is no definite proof that the volume of traffic which may be induced will even prevent a permanent and recurring loss on the undertaking ?

In one respect only is economic relief immediately apparent—in the employment of ex-miners, and for a great proportion of these some years of regular work could undoubtedly be found in the construction of the tunnel ; while the provision of material chiefly steel would undoubtedly relieve unemployment in other industries.

It must be remembered, however, that this is but a temporary alleviation of, and not a solution to the problem of unemployment, and it is an open question whether some more permanent cure for this social evil cannot be found, or, at least, one with more hopeful results.

For the rest : The tourist and the business man—the great minority—from them the return is nebulous.

It is impossible to refrain from arguing that if trade returns can be enhanced by more frequent personal visits to and from the continent, then surely it is a short-sighted policy to wait ten years for the channel tunnel before exploitation.

It cannot but be felt that the demand for a channel tunnel is only the clamour of a few interested persons desirous of either facilitating tourist traffic or of ensuring a more luxurious mode of conveyance in greater safety at State expense ; while one, adequate to all purposes and adaptable for all purses, already exists.

The claims to a resultant increase in trade are insistent but are they real ?

In this present state of trade depression is not every avenue of trade amelioration being explored ? If not, why not ? and must the Empire wait ten years for the construction of a channel tunnel to be completed for a trade revival to commence ; and will the promised markets wait ten years ?

To sum up ; economically the claims made for the channel tunnel project appear to be selfish, visionary and lacking in substance, while further proof must be forthcoming and such must be demanded—

otherwise the, to all outward appearances, vapid utterances, through the cheap press, of a minority may commit the majority to increased taxation for the construction and maintenance of what, in two senses, may be a permanent drain.

Political Advantages and Disadvantages.

We have next to examine the political effects of the construction of a channel tunnel and deduce therefrom the advantages and/or disadvantages.

Without careful analysis it is doubtful whether the psychological value of our existing insularity is ever fully realized. When once a tangible link with the continent, in the shape of a channel tunnel, has been forged, Great Britain will never again experience that sense of safety—psychological though it may be—which actual insularity produces.

Neither sea nor air passages—easy though they now are—create quite the same feeling as that induced by an earth-borne link.

The former methods of travel are liable to interruption by weather conditions, the latter, never.

There can be no gainsaying the psychological effect a tangible earth-borne link can produce as opposed to those dependent on air and water ; this effect has been experienced by many and is particularly induced by rail communications.

There is a vast difference between a journey from England to France and one from France to, say Switzerland : but this difference cannot be dismissed by mere reference to the uncomfortable changes the sea route involves, it has a definite psychological effect.

If this is so the converse holds good, namely, that actual insularity, such as now obtains, has a definite psychological effect on the minds, customs and outlook of our peoples ; and, further, that if we tend to remove this insular effect—psychological though it may be—we tend to alter our national character.

To change the character of a people must ultimately result in a change of national outlook : character and outlook are the foundations of national policy and, to a greater extent, of foreign policy.

With the advent of a tangible link with the continent, it is argued, some such change must eventually occur in Great Britain.

To the uninitiated, and to the unthinking, this change may never manifest itself at all, or, being so imperceptibly slow, may not be realised until actually accomplished, nevertheless inevitably must it come, resulting in this case in the psychological,—if not actual—elimination of our insularity.

Insularity, as we have already shown, is a very definite feature of our national character ; but it is even more than this, it is one of the rocks upon which the whole foundation of Empire rests,—and we are now in fear of its safety.

The tangible link not only threatens to deprive us of our insularity but it also tends to provide a medium for tangible influences.

By our very insularity and isolation we have, in the past, been in a singular position in respect to political quarrels in Europe ; we have always been in a position to abstain from those quarrels at will ; we were definitely divorced from Europe both physically and psychologically, and could remain unswayed by any of its influences if we so wished.

The channel tunnel, in our opinion, will provide the medium for tangible influences ; influences create an atmosphere, and the greater the potency of the one the greater the density of the other. It is the atmosphere of continentalism with which we shall have to contend and from which we shall have most to fear in the channel tunnel.

Do we welcome such influences ? Do we, as an Empire, want this change in atmosphere ? Can we afford it ? Shall we benefit or lose by it ?

These are the questions we have to ask ourselves. The strength of England, both now and in the past, to what is it due ? To sea—centrality and to insularity.

What was proved after the struggle terminating in 1815 to be the real nature of the strength of Great Britain which had brought her out of that lengthy struggle uppermost ? In what had it consisted ?

Not in armies—not in population—and certainly not in diplomatic skill ; rather was she deficient in all three for her requirements.

The power which Great Britain had peculiar to herself was this :—

A free unhampered use of all the seas of the world, whereby she could remain in touch with the world at peace and make use of its resources, and great naval power at sea.

These were sufficient ; in these lay the strength of England and this strength, formidable as it is in peace, is even more formidable in war if correctly applied.

A century later the situation was unchanged ; there was the same free unhampered use of the sea, there was the same great naval power at sea ; but, the power of application was in the first instance withheld, with what results we shall see.

In his ' History of the Wars of the Revolution ' Jomini writes of Great Britain as follows :—

“ A nation of twelve million souls inhabiting an island, and therefore seamen every one of them ; sheltered by that very isolation from all their neighbours' quarrels,” and again in the same work, “ As long as the chief strength remains in the hands of a Power, which is an island, nothing can be expected but monopoly and human despotism.”

Great naval power at sea, isolation and insularity are the features to which that great writer attributes England's might at the close of the wars of the revolution ; and he goes so far in this history as to discuss the means by which that sea-power could be wrested from us and transferred to the Continent of Europe, terminating his discussion with the ominous words “ This proposition should become a guiding principle in the cabinets of Europe.”

Germany, as we know, is the only Continental Power which has ever attempted seriously to pursue this policy, and yet without success ; it was however the pursuance of this policy by Germany that caused our entry into the war in 1914—to uphold our sea-power.

If Great Britain were unable to avail herself of her sea-power her might would be reduced and she would be forced to fight on land ; this is what very nearly happened in the late war.

Sea-power and sea supremacy were there, but they were not availed of to the full, and, in consequence, we were forced to raise land forces on a scale unprecedented in the history of the Empire ; whereas, had sea-power been used to the full in the first 18 months of the war, as it ultimately was in the final stages, no such military effort would have been required ; since the war would have ended in under two years in the defeat, by economic pressure, of the Central Powers. Such a statement is easily capable of proof and equally incapable of refutation, and is here used merely as evidence—if indeed evidence were

needed—that insularity, isolation and great power at sea are as important to Great Britain to-day as they were a century ago.

To return however to the questions we have set ourselves the task of answering :—

If the influences of continentalism are to create a continental atmosphere overshadowing our present insularity, then, very definitely, we neither desire such an atmosphere nor can we afford it.

Our continental commitments to-day, in this age of post-war treaties and league conventions, are already a heavier burden than we have formerly borne ; any further implication in affairs on the Continent of Europe will definitely transform Great Britain into a continental nation.

This would be a retrograde step neither ensuring security nor promising prosperity, whilst it would not meet with Dominion support.

Rather, the further aloof we keep from European politics the greater would be the benefit to the Empire and the more certain would we be of its unqualified support in the maintenance of Empire.

Dominions will assist the Motherland in the maintenance of her ideals—peace with security and prosperity ; they will neither countenance nor commit themselves to the support of avoidable continental entanglements.

The effects of strengthening continental influences and creating a continental atmosphere can therefore be summed up as :—

- (a) The substitution of continentalism for isolation.
- (b) The abolition of insularity both psychologically and tangibly.
- (c) The introduction of a political disability foreign to the present nature and past history of the British peoples and threatening to undermine the unity of the Empire.

Thus, we eliminate two of the factors, which, we have been at pains to show, go to make up the might of Great Britain—Isolation and Insularity. The third—Great Sea-power—is also endangered by the threat of continentalism as will be shown later.

The enthusiasm on the continent for the channel tunnel scheme is not without its significance ; it is neither possible to attribute it to altruistic motives nor to hopes of commercial prosperity. Its significance is definitely political.

It reveals the fact—oft suspected—that the century old teachings of Jomini, meagre though their results have been in the past, are not forgotten and are still bearing fruit ; in consequence, any opportunity to undermine Great Britain's strength, founded in insularity and isolation, such as a channel tunnel offers, is seized upon with avidity.

Military Advantages and Disadvantages.

The military aspect of the channel tunnel requires examination under three heads :—

- (i) In the event of war.
- (ii) The effect on shipping.
- (iii) General strategical effect.
- (i) *In the event of war.*

This can best be discussed under two sub-heads ;

- (a) France as an enemy or as a neutral.
- (b) France as an Ally.
- (a) *France as an enemy or as a neutral.*

This aspect can be dismissed in a few words. In neither case would the tunnel be available for military use, whilst, with France as a neutral, civilian traffic might even be restricted.

In the event of a war with France the channel tunnel would in itself constitute no actual military danger.

It might however, in the event of a British invasion of France prove a distinct danger were the clamour of interested financiers, and the pertinacity of party politicians, to demand its early restoration to use, as this would inevitably result in a diversion from the main objective.

- (b) *France as an Ally.*

Pre-supposing a war on the continent, and the channel tunnel in use as a line of communication, there would undoubtedly be some reduction in naval commitments.

If the tunnel were so used extensively the continental end would to all intents and purposes become an overseas base, and from this we deduce certain definite disadvantages :—

- (i) The inflexibility of such a base.
- (ii) The definite strategical commitment such an inflexible base involves.

Would Sir John French have welcomed the existence of such a base in 1914 and such a commitment ? Had he attempted to defend it there is no doubt but that he would have been separated from the French Army and, ultimately, would have had to withdraw to England, or accept defeat.

Moreover, even if a commander in the field was prepared, or forced, to jettison the tunnel as a line of communication he is unable to change such a base, with its earth-borne communications, with the same rapidity as was done in 1914 when the communications were sea-borne.

In the latter case the shipping required was actually in use, and diversion of that shipping to a different port, 100 miles or so further south, involved a delay of merely a few hours.

In the suppositious case a change of carrying method is involved ; shipping has to be collected, and, in some cases, specially fitted, whilst unforeseen naval escorts have to be provided.

The channel tunnel, *per se*, has distinct advantages as regards a strategical concentration on the continent since, it is estimated, such could be more expeditiously carried out than by sea ; on the other hand it postulates movement to one particular area only, and its very influence may therefore tend to induce bad strategy at the outset of a campaign.

There is little doubt that to a commander in the field the mere existence of an inflexible base such as the channel tunnel would stultify his freedom of action.

(ii) *The effect on shipping.*

Reference has been made in the economic section of this article to the possibility of diverting the carriage of certain commodities from the sea route to the channel tunnel. This, as has been pointed out, tends to reduce our shipping and our ship-building industry.

In the present shipping war with the U. S. A. we cannot afford any such reduction, while in the event of an unlimited war, whether on the Continent of Europe or elsewhere, our shipping requirements as an Empire can, even now, scarcely be met by our existing tonnage.

Shipping prospects therefore as a result of the channel tunnel would be seriously impaired with serious results in a national emergency.

(iii) General strategical effects.

It is an obvious fact that the more continentalized Great Britain becomes the greater must be her preparedness to assert herself as a Continental Power.

Deprived of her insularity—if only psychologically—and no longer isolated by virtue of the existence of a channel tunnel, she must, it is contended, conform more closely—economically, politically, and militarily to continental ideas and methods.

It is doubtful whether the physical—as apart from the psychological, value of Great Britain as an island is generally realised to the full.

The mere absence of a land frontier relieves our country of a pre-occupation and anxiety of inconceivable magnitude—A glance at the frontiers of most of the Continental Powers of Europe will immediately confirm this.

The critic will doubtless say that the mere existence of a channel tunnel does not produce a land frontier. In actual fact he would be right, but psychologically he would be wrong.

Once committed to continentalism—as inevitably we shall be with a channel tunnel in existence—we cannot draw back. We shall be forced to adopt a European standard. We shall be forced not only to take a greater share, and play a greater part, in European politics, but to maintain the military means wherewith to enforce our opinions; and that must be immediately forthcoming.

Gone will be the days, when, in our splendid insularity and isolation we could, in comparative leisure, raise and train our forces behind the sure shield of a great navy, and when intervention was a matter of our pleasure.

As a Continental Power we shall be forced to maintain, for immediate intervention, armaments on land and in the air commensurate with the requirements of our new status, or, alternatively, be content to see our prestige—not only on the Continent of Europe but the whole world over—greatly diminished.

We cannot afford to be, at one and the same time—a Great Sea-Power and a Great Land and Air Power, we must make our choice.

The existence of our Empire is dependent upon our might at sea; as a Continental Power our prestige and status would be dependent on our military strength on land and in the air. On which does our choice fall? The answer is never in doubt.

Conclusions.

To sum up therefore :—

Economically.—No advantages appear to accrue from the construction of a channel tunnel except the possibility of a temporary alleviation of the existing unemployment problem ; rather does there appear to be the danger of a distinct disadvantage in the probable diminution of our maritime strength.

Politically.—If, for economic reasons, the channel tunnel be classified as an evil means of communication, we cannot refrain from using the word ‘communication’ in its dual sense, and, ‘Evil communications corrupt good manners’.

For the British Empire good manners are undoubtedly insularity and isolation, implying, as history teaches us, abstention from European politics.

With the channel tunnel in existence this is impossible.

Militarily.—The disadvantages of the existence of a channel tunnel outweigh the advantages.

Although the mere existence of such a tunnel offers no tangible threat, such as invasion, its very presence must exert a subversive influence on military plans and on military requirements as a result of increased military commitments.

Even as the fear exists that the economic advantages ascribed to a channel tunnel are but the fictitious claims of a minority financially interested, so too is it to be feared that the continental eagerness for the construction of this earth-borne link is not merely adventitious.

Rather is it to be believed that the century old teachings of Jomini are even now “A guiding principle in the Cabinets of Europe.”

A DISCUSSION ON THE TACTICAL HANDLING IN NORMAL WARFARE OF AN INDIAN BATTALION UNDER THE NEW ORGANISATION.

By

“JAT.”

For purposes of this discussion, the proposed new organisation is taken as three companies per battalion—unit, with a machine gun company of 12 guns in a British battalion, and of 8 guns in an Indian battalion.

General.—Any one reading the report on the Staff Conference at Camberley 1928, can scarcely fail to be impressed with the fact that an important body of military opinion at Home considers that, with the numbers of machine guns which we may expect to encounter in a modern battle, coupled with the artillery support at present available, infantry in the attack have a very poor chance of ever getting to grips with their enemy.

It was suggested at the conference that we should develop our machine gun tactics on more offensive lines, particularly in the attack, *i. e.*, utilise our own machine guns more to neutralise the fire of the defence, and various ways of doing this were discussed.

Most of the methods advocated to cope with this situation gave extra mobility to machine guns by mounting them in motor driven vehicles, and by affording them armoured protection while in movement against machine gun and rifle fire.

Any such consideration, however desirable, is outside the scope of this essay. We are asked to consider how we may best employ the machine guns with which we are about to be armed, and we may assume that transport for the extra machine guns coming to us will be either pack or wheel transport, probably the former.

With the proposed increase in our machine gun strength and the decrease in our rifle power, machine guns must necessarily become of greater relative importance, and this fact must show in our plan of action.

So that, what the problem really amounts to, is to consider how to arrange our tactics so as to give to our machine guns a better opportunity of exercising an increased influence on the fight.

But if we are not to be given added mobility, it is difficult to find any way of doing this unless we can effect it in some way by means of concealment leading up to surprise effect.

This we suggest might possibly be developed by employing more deliberate manœuvre, in the form of special arrangements for establishing our machine guns in a selected position, as a *preparatory measure* before pushing in any decisive attack.

At first sight it might be thought that such tactics would be at the expense of the time factor; we are well aware of the importance attached to *pace* but we believe that pace need not suffer materially, and in any case would not suffer in the long run.

The point will be further developed under heading of "Attack."

To consider the five operations of war in detail:—

(i) *The Advanced Guard* (Normal Warfare).

It does not seem to us that the new organisation is likely to lead to any particular change in our present tactics.

The battalion in advanced guard will still consist of a vanguard, normally composed of one company, which will in future be accompanied by a section of 4 machine guns. The remaining of the battalion forming the main guard as before.

Since the vanguard, so constituted, will consist of a rifle strength of $1/3$ rd., and a machine gun strength of $\frac{1}{2}$ of the whole battalion, the vanguard when deployed will become still more emphatically the pivot of manœuvre for the remainder.

(ii) *The Attack*.—The increase in machine guns at the expense of rifle strength will have the effect of forcing C. O.'s to think relatively more in terms of machine guns, and their tactical handling, than may perhaps have been the custom up to date, altering their tactics and plan of action to conform.

Thus the C. O. of a unit, when forming his plan in future, will be induced to think more on the following lines:—

"Where do I want to *establish* my machine guns in order to cover my advance."

Whereas formerly, he was merely accustomed to ask himself:—

“In what formation shall I advance and what shall I do with my machine guns.”

And though at first sight this may not appear to involve any very striking change, it is suggested that it may lead to the attack in future developing in three more or less distinct stages.

- (a) 1st. Stage.—Preliminary contract with the enemy; disclosing the actual position held; testing its resistance, and forming a screen behind which the machine guns move into position.
- (b) 2nd Stage.—Establishment of machine guns in the position chosen for them.
- (c) 3rd Stage.—The actual assault by the reserve companies under cover of the fire of the machine guns.

The advanced guard may be able to carry out the mission set in the 1st phase in its entirety and under its cover, the attacking battalion be enabled to place its machine guns in position to cover the main assault, but there will be many occasions when it will be necessary for the battalion detailed to the assault to launch a preliminary attack to get its machine guns to the spot selected for them. Having thus established its machine guns, the main assault will be launched.

This procedure is to some extent provided for in Machine Gun Training, Section 94 (2) and (3), but here the machine guns seem expected to be in position when required by the infantry, whereas it is now proposed that the main infantry movement should not take place before the guns are in position to support it.

Of course when referring to three distinct stages, it must be understood that in the actual operation as a whole, these three stages would be carried out as nearly in one continuous movement as practice and the resistance offered by the enemy permitted. But for purposes of deciding on a plan of action, it is thought that it would clear the way to a decision if the problem were studied in the sequence suggested.

The main difference from the tactics to which we are accustomed is simply that this 2nd phase will in future receive greater consideration when forming the plan, and greater deliberation when the plan is translated into action.

In his search for such a position for his machine guns the unit commander would be influenced by the following considerations:—

- i. The ideal practical machine gun range.
- ii. The desirability of providing flanking rather than overhead fire.

As regards (i):—Some ideal practical machine gun range must exist from which machine guns may be expected to develop their maximum fire effect. And it is suggested that this will be governed very largely by facilities for observation of fire, and might be found somewhere between 1,000 and 1,500 yards from the immediate objective. This may not be generally accepted perhaps, but the point is that such a range once recognised would, by application to the ground, indicate some position on which it would be desirable to establish the machine guns.

As regards (ii):—The Staff Conference emphasised the unreliability of overhead machine gun fire, and the statement even passed unchallenged that overhead fire was on occasions quite as much a danger to the troops it was intended to support as it was to the enemy; the C. I. G. S. summing up that fire from a flank should receive primary consideration.

This distrust of machine gun overhead fire is we think due to theories in machine gun fire direction; sanctioning fire at ranges where fire effect cannot always be satisfactorily observed.

(Hence the ideal machine gun range of from 1,000—1,500 yards suggested above).

These two considerations should at least indicate to a battalion commander where to look for a position on which to establish his machine guns. And once found it only remains to get them there as quickly and with as little loss as possible.

Should it be necessary for these guns to move forward from their original position as the attack progresses, they would, of course, do so half at a time as the situation required; but while the initial break through remained in any doubt whatever, the ideal to strive for would be for all available machine guns to be in action in what was deliberately believed to be their most favourable fire position, only moving forward from it when, and if, obliged. (M. G. T. 94 (3)).

There is a point of procedure in brigade control which may affect tactics within the battalion.

Take the quite normal case of a forward battalion in an attack whose machine guns have been left at its own disposal ; supposing the most suitable machine gun position for " A " Battalion's guns to lie in the area allotted to a neighbouring unit, and to be occupied by the enemy ; or even if the desired position was sufficiently close to the enemy's forward area to make the approaches to it dangerous. How is " A " Battalion Commander to ensure that his neighbouring unit commander will have deemed it necessary to make good that ground in preparation for stage 2 ?

Will it not be necessary in fact for the brigade to indicate in their plan of action, some *general* line on which it is intended to establish these forward battalion machine guns ?

The need for something of this sort becomes more apparent still when one recollects the increased number of machine guns that will now be available for brigading purposes.

Machine Gun Training Sec. 78 (6) gives official guidance for brigading machine guns in the attack. From this it will be seen that it would be quite a normal procedure for a certain proportion of machine guns from the rear battalions to be brigaded.

These two rear battalions will have some 16 or 20 guns available, (according to whether they include a British unit or not), and of these it might quite reasonably be decided to brigade 8 or even 12 guns, in fact, not to do so might invite criticism.

But if these guns are to be brigaded, we once more feel as a battalion commander that we would like to know something about where they will go, and on what areas they are intended to fire.

It should be borne in mind also that the two front machine gun areas in an attack, *viz.*, the forward area guns, and the brigaded guns in the supporting area, are very intimately connected, and the best results are obtained from co-ordinating the fire effect of both.

Consequently it is suggested that there might be some advantage gained if the brigade plan were to lay down a general line for each of these machine gun areas.

Turning to the infantry concerned.

We have three companies to dispose of :—

What we require in the first place is a forward covering force to carry out phase (i), followed by a reserve sufficient to drive home the decisive attack when preparations for supporting it with machine gun fire are complete.

For this purpose we suggest one company working over the entire battalion frontage, with three platoons up and one in reserve ; followed by the remaining two companies, in, say, square formation of platoons, at 400 yards distance from the leading company, sharing the battalion frontage between them.

The alternative of two companies to the front line covering party, with one in reserve, is considered to provide insufficient weight to the final punch.

(iii). *Outposts*.—Are a form of defence, being normally a defence with a more or less definite time limit to the resistance required. For such a particular form of defence, machine guns are just as much necessary for the framework as for any other.

It is considered that all 8 guns will normally be required distributed over the whole extent of battalion front. Their distribution will be the responsibility of the machine gun officer who will also co-ordinate their fire effect.

Their distribution in depth is desirable, but, owing to the numbers available to the frontage held, this will not normally be possible. (I. T. II. Chapter 4, Sec. 31).

Once distributed, they should come under the orders of the outpost company commander in whose boundary limits they may happen to have been posted. This latter officer should however work in liaison with the machine gun officer in respect to any orders he may wish to issue, *i. e.*, he should consult with the machine gun officer whenever possible before altering any of the arrangements made ; informing him immediately afterwards of action taken whenever the urgency of the situation precluded previous reference.

In as much as the machine guns constitute the framework of the defence, the sooner these guns are in position and their lines of fire decided upon, the sooner the outpost infantry will be able to take up theirs.

Turning now to the infantry concerned. There would appear to be the two alternatives of forming either two outpost companies or three.

The disadvantage of the first alternative is that the division of the whole battalion front between two companies will result in each company commander being made responsible for a rather larger area than is considered satisfactory. On the other hand one complete company unit will be available as battalion reserve.

If this alternative be adopted, it is suggested that the battalion reserve might take on all duties of patrolling ; but, as it is desirable that outpost company commanders should be responsible for the reconnoitring patrols sent out to their immediate front, it is proposed that the reserve company be detailed in watches throughout the night, each watch composed of a platoon, two sections of which would report to each outpost company commander at specified hours for all duties connected with patrolling.

An incidental advantage obtained from the method, would be, that, besides distributing the outpost duties more evenly throughout the battalion, the reserve company should in this way get to know a little of the ground over which they might expect to have to counter-attack.

The disadvantage of the second alternative, *i. e.*, that of forming three outpost companies, is that it would leave no battalion reserve, and this would have to be formed by withdrawing one platoon from each outpost company, in which case the reserve company would be a composite unit and possess no company headquarters.

For this reason the first alternative seems to us the better.

(iv.) *Defence.*—The training manuals describe machine guns as the framework of the defence, consequently we will consider their requirements first. And having disposed of all available machine guns to what we believe to be best advantage, we will then step back and study the pattern with a view to fitting into it the infantry at our disposal.

Here we discover again, that it becomes necessary to consider the matter from a point of view outside battalion control in order to get a clear view of the picture and its requirements. For it will be in the defence ‘*par excellence*’ that the best results are obtained from co-ordinating as much of the machine gun defence plan as possible under brigade control.

F. S. R. 93 (5).

Machine Gun Training 110 (1).

And again we find that the first two areas of machine guns, *viz.*, those of the forward and supporting guns, are so intimately connected that it would be most desirable to co-ordinate them under brigade control if possible.

The difficulties that arise, and the advantages offered, become much clearer in their relative importance if we stop to consider what are the chief objects of brigading machine guns.

They are :—

- i. To make best use of all available machine gun weapons to suit the situation in the brigade as a whole.
- ii. To co-ordinate their fire effect.

The first of these two is obtained by the brigade decision regarding distribution, *i.e.*, whether they will utilise guns from the rear battalions in a forward position or not, and if so, in what proportion.

Let us examine this problem in the light of the increased number of machine guns now available, *i.e.*, 36 in the brigade.

Taking a normal situation and considering the forward areas first on a battalion frontage, how many fire positions will be necessary to effectively cover the front.

Two would be insufficient, four seem to be about ideal, in other words, 8 guns per battalion front or 16 for the front areas of the brigade.

For the middle or supporting area, with its main rôle of checking and holding up any break through, 8 or 12 guns should be sufficient.

While 8 guns, *i.e.*, 4 with each battalion, would be a suitable number for the reserve area.

So much for distribution.

The next consideration is to what extent should these guns be placed under brigade control for co-ordination of fire effect. (M.G. T. 103 (3)).

The primary rôle of these guns, each in their own particular area, will give us a clue.

The rôle of the guns in the forward areas is to prevent a break through. That of guns in the supporting area is to check and hold it up when once effected. While guns in the reserve area are intended to support the reserve in any counter-attack that may be organised.

It would therefore appear desirable to co-ordinate the machine gun fire effect of the two forward areas whenever possible, while the necessity for doing so in the reserve area is not quite so apparent.

The problem then resolves itself into this :—

To what extent do we want the brigade machine gun officer to control guns placed in these two forward areas ; and over how many guns can we reasonably expect him to exercise such control ?

Whether he could control the machine guns we have allotted to the two forward areas, *i.e.*, 24 to 28 guns, is probably a matter of opinion.

If machine guns are to be considered as "the framework of the defence" it would certainly appear desirable both forward and supporting area guns, if such control can be satisfactorily carried out.

In the case of the supporting area machine guns, *i.e.*, those guns taken from reserve battalions for the purpose of forming the supporting area defence, there can be little doubt that these guns should be under brigade control.

And we think that even the forward area machine guns might also be included in this control, provided that, in their case, control was limited to approving their proposed positions and lines of fire, *i. e.*, general co-ordination.

As regards the infantry :—It seems to us that there can be only one possible distribution of the three companies available, *viz* :—Two to the front line with one company in support.

It is necessary to hold the front part of the forward areas in sufficient strength to give reasonable chance of holding the enemy, there is a tendency sometimes shewn of occupying the front part of the forward areas so weakly, in an effort to obtain depth with the remainder, that the total fire effect is often quite inadequate to keep the enemy at arms length, in which case a break through is unavoidable, and many of the advantages of the defence have then to be sacrificed in order to restore the situation. This would seem unsound.

(*v.*) *Rear Guards.*—As with advanced guards, little or no change, the only exception being that the 8 available machine guns would accompany the rear party, being employed wherever possible to delay the enemy at a distance.

To Summarise.—It is obvious that the machine gun will in future play a very much more important rôle in all our tactics than it has in the past.

So much so that it becomes a matter for consideration whether the present position of the brigade machine gun officer is quite satisfactory.

This appointment, though visualised in the training manuals, is actually unprovided for in Peace or War Establishments, and the duties are in some cases not too definitely defined.

Having regard to the increased importance of his expert advice to the brigadier, together with the increased number of guns which he may be expected to control in the future, it becomes a question whether it may not be desirable for this appointment to be held by an officer of field rank, who would have the additional advantage of being mounted.

Further, that whatever may be decided as sufficient for peace time training, provision should definitely be made for the brigade machine gun officer's appointment to be held as a full time job on mobilisation.

TO GILGIT BY AIR.

By

LIEUT.-COLONEL J. F. TURNER, D.S.O., R. E.

The usual route from India to Gilgit is *via* Rawalpindi-Baramulla-Bandipur, at the north end of the Wular Lake,—Gilgit. The first section, Rawalpindi to Baramulla, is done by car, the second section, Baramulla to Bandipur, by boat, and the third section, Bandipur to Gilgit, by pack transport. The road from Bandipur to Gilgit is a good pack road, 200 miles in length, and crosses the Raj Diangan Pass (about 12,000) and the Burzil Pass 14,200. It is closed for pack transport from about October 15th till June 15th, owing to snow on the passes, and during the winter it is frequently closed for even dāk runners for ten days at a time. A telegraph line runs from Bandipur to Gilgit and on from Gilgit to Chitral and Drosh, but this, also, is liable to be broken by avalanches. There is no wireless station in Gilgit, which is therefore very isolated during the winter, and for political reasons it was considered advisable to connect Gilgit to India by air. Air Vice-Marshal Sir Edward Ellington visited Chilas and Gilgit during the summer of 1925 and selected sites for landing grounds. Their construction, however, was delayed. During the summer, when a Royal Air Force officer could visit them, the heat in the Indus and Gilgit valleys is so great that no labour will work. During the winter, the lack of technical supervision prevented the work being carried out. In October 1928, a R. A. F. officer was sent to Gilgit to supervise the construction of these two grounds, and so rendered the flight possible.

With perfect arrangements and in perfect weather the shortest time a traveller could get to Gilgit by the usual route was 12 days. This would entail double marches all the way. By air, Gilgit can be reached in $2\frac{3}{4}$ to 3 hours from Risalpur.

The route taken for the flight of 4 Wapiti aeroplanes to Gilgit on the 28th March 1929, was from Risalpur *via* Chak dara-up the Swat River to the Kotkai Pass, across to the Indus valley, which was then followed all the way to Bunji, and finally up the Gilgit River to Gilgit. A halt was made at Chakdara to re-fuel. Petrol had been sent up to Gilgit in October and in order to draw the minimum of petrol for the return journey, it was decided to re-fuel at the farthest point possible.

The actual times of flight were :—

Leave Risalpur	..	0730	hours.
Arrive Chakdara	..	0759	„
Leave Chakdara	..	0917	„
Cross Kotkai Pass	..	0945	„
Pass over Chilas	..	1050	„
Pass over Bunji	..	1113	„
Arrive Gilgit	..	1128	„

There is a special interest in this route owing to the fact that it traverses Indus Kohistan in which no British Officer has ever penetrated. The Hazara Field Force reached Palas on the Indus but between Palas and about 20 miles west of Chilas no white man has seen the country. The only record and survey we have was made by an Indian many years ago and it was found extremely accurate as far as it went.

The route as far as Chakdara and from Chilas to Gilgit is well known. From Chakdara the broad Swat Valley is followed till it bends sharply northward. Here the flight took the nullah leading to the Kotkai Pass, which was expected to be 9,000 feet but found to be under 7,000. The valley down to the Indus from the Kotkai Pass is very steep and narrow ; an unpleasant place for a forced landing. Some eleven minutes, however, took us from the Kotkai Pass to the Indus valley and here the magnificent scenery banished all thoughts of engine trouble. From the point where we struck the Indus up to Sazin, opposite the Tangir and Darel valleys, the Indus flows in a stupendous gorge. To see the ribbon of river which is about 2,000 feet above sea level, below, one had to look over the edge of the aeroplane cockpit, whereas, close alongside the wings, the mountains rose in some places to over 15,000 feet in one slope, which consisted of precipice after precipice with a few stone slopes to vary the monotony. The flight travelled at about 12,000 feet. The only possible description of the hillsides is that they equalled the worst markhor ground. At intervals a valley ran in from one or other bank and villages could be seen at the mouth of or up these valleys. From Jalkot onwards to Banda-i-Sazin there appeared to be no track on either bank of the river. Before the flight was approved the Resident of Kashmir and the Chief Commissioner, N .W. F. P. warned the inhabitants of our proposed flight and asked them to help us in case of a forced landing. A Gilgit official went down the Indus as far as Jalkot

to give this warning and came back with broken nails and cut hands from continual climbing round precipices and over bad ground. This official is an experienced hillman and hard as nails.

It is little to be wondered at, that Indus Kohistan consists of a number of small tribes. Except during the summer and at great heights there is little communication between valley and valley and the inhabitants of every little valley form a separate community. The most marked break is between Jalkot and Banda-i-Sazin on the left bank of the Indus.

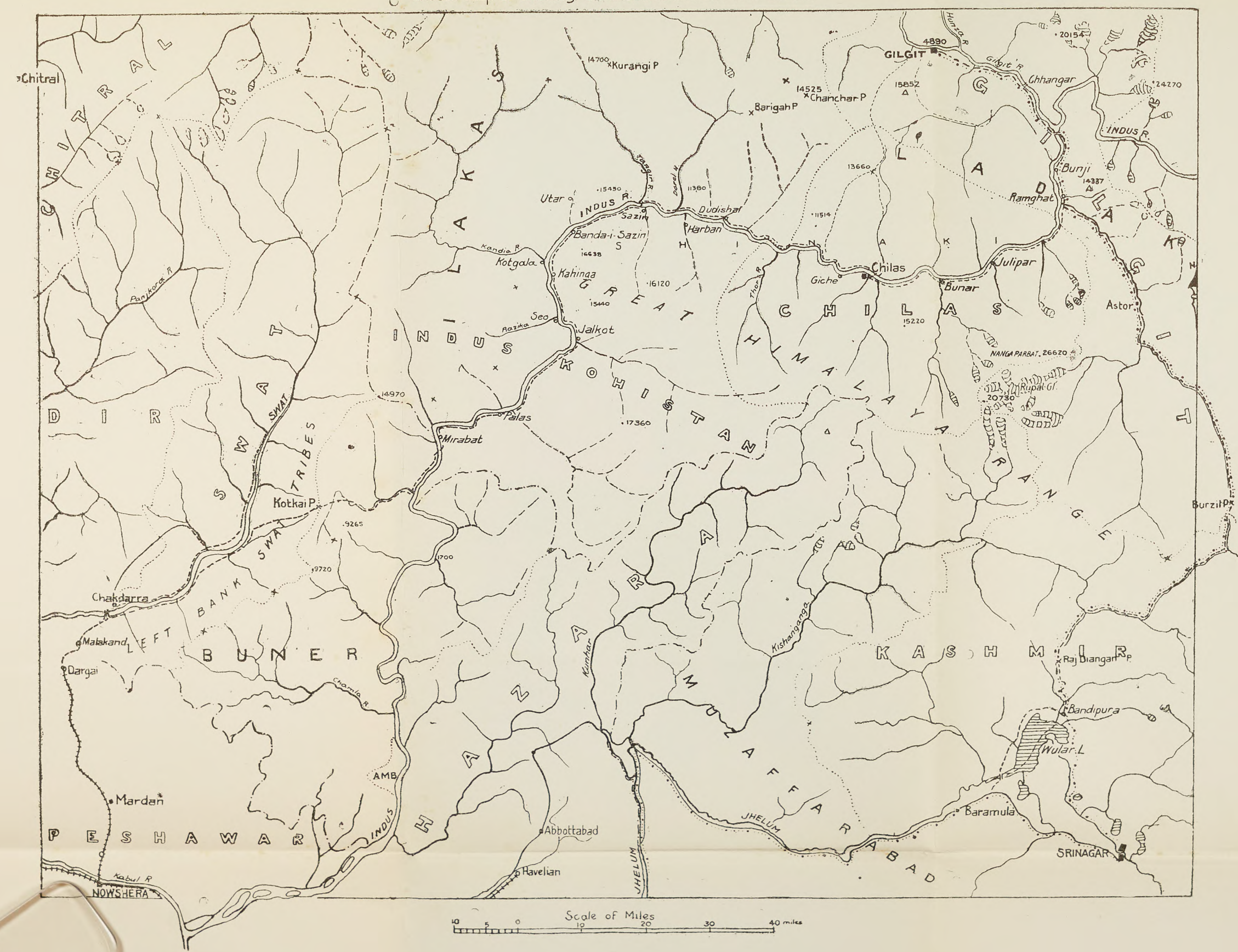
Our reception at Gilgit was very cordial. Excellent arrangements were made and the ground was kept clear. We had to stay the night in Gilgit and were most hospitably entertained by the Political Agent and the officers stationed there. At Chilas, on our return, we were equally hospitably entertained by the A. P. A., Chilas, and his wife, on whom we inflicted our presence for several days awaiting the arrival of petrol by air; the petrol sent up to Gilgit in October having been contaminated *en route*. Both grounds are good, and a great deal of trouble was taken over them. The Mirs of Hunza and Nagar were in Gilgit when we arrived and were very interested in the aeroplanes. When we flew over Chilas on our way up, the Wazir refused to believe there were men in the aeroplanes and stated that they were some exposition of "bijli" (electricity).

The landing grounds at Gilgit and Chilas have no great military significance.

It is almost impossible, except by means of heavy transport aeroplanes, to bring up stores, petrol and bombs to these places to enable them to be used for operations. They are, however, of great value politically. The inhabitants of Tangir and Darel, some of whom from time to time raid into the Gilgit Agency, must have seen the aeroplanes and will consequently have recognised that they are not entirely immune from attack. It would be quite possible to reach them from an advanced base at Chakdara.

The real value however, of these grounds is that they enable Gilgit to be linked up with India. In emergencies, sick officers or their families can be removed, and the feeling that they are not entirely isolated must be of great assistance to the Political and other officers in the Agency.

Sketch map of country between RISALPUR and GILGIT



NIGERIA 1929.

By

BREVET Lt.-COLONEL A. E. PERCIVAL, D. S. O., O. B. E., M. C.

Up to a few years ago the vast majority of people knew little of Nigeria, except that it was somewhere in Africa and was commonly looked upon as "The White Man's Grave." This is not surprising when it is realized that British official administration only dates from the commencement of the present century and that Nigeria is therefore one of the youngest, though one of the most important, of the British Dependencies. Of recent years a more widespread knowledge of Nigeria and her peoples has gradually been springing up, though it is probably safe to say that, even now, the vastness of Nigeria and the importance of the work which is being carried on there by British administrators is little realized.

Some idea of the position which Nigeria fills in the Empire may be given when it is stated that in size, Nigeria, including the mandated territory of the Cameroons, is three and a half times as large as the United Kingdom and Northern Ireland, and that its population is approximately equal to that of all the British Dominions combined. This population, as in India, is composed of a number of different races and tribes, the predominating races being in the south, the Yorubas and Ibos, and in the north, the Hausas and Fulani. There is thus no Nigerian nationality, the semi-Europeanized natives of the coast towns differing just as widely from the Hausas of the Northern Territories as the Indians of the plains do from the hillmen of the North-West Frontier. The problems which face the administration in Nigeria are thus, in many respects, similar to those which have for very many years confronted the Government of India. Thus there are the big Emirates of Northern Nigeria, vast tracts of country ruled by their own native rulers with the help and guidance of British Political Officers. These Emirates are developing on much the same lines, though on a smaller scale, as the Indian Native States. In the large towns of the coastal region, on the other hand, are to be found many natives who have received an English education and absorbed European ideas. One of the most important problems at present facing

the administration is the place to be taken by these African natives in the Government and administration of the country. For it must be realized that the avowed policy of the British Government as regards West Africa is that each Dependency there belongs to the Africans and that they must be given as large a measure of self-government as they are from time to time capable of assuming. It is clear, therefore, that Africans of education and intelligence, and in many cases of wealth; as are these Africans of the coast towns, must inevitably be accorded a share in the control of public affairs. It is the measure of the control to be accorded them which is one of the constant problems of the British Administration.

If we compare the twenty-eight years during which the present system of Government has been developed in Nigeria with the vastly longer period taken by that in India, it will be seen how rapid has been the progress made. There is indeed real danger that progress may be too rapid and responsibility conferred on the native rulers greater than they are yet capable of assuming. For the failings of African native rule, like those of native rule in other parts of the world, are corruption and extortion, and these failings must be eradicated before a satisfactory régime can be established.

The topography of the country varies with the climate. In the south, the damp heat has produced a forest belt of dense vegetation. Much valuable timber, especially mahogany exists here, while the undergrowth is in places quite impenetrable. This belt extends inland for some sixty miles from the sea-board. Further north the bush becomes gradually thinner and the trees more stunted until the northern frontier is reached where Nigeria marches with the French Sudan and the great Sahara Desert commences. In the northern territories several high plateaux exist, the best-known of which is the Bauchi Plateau, where the Nigerian tin mines are situated.

One of the questions one is most frequently asked on returning Home is "What is the climate like out there now?" This is a question which it is not easy to answer, for it must be realized that the climate of, say, Lagos, is entirely different from that of the Bauchi Plateau. Although the climate is nothing like as bad as was at one time supposed, it must be frankly admitted that it is not a climate in which Europeans can normally live for long periods at a time, without suffering some ill effects. Hence the normal tour for Government officials

is fixed at 18 months with a liberal period of leave at Home for recuperation. At the same time, health depends largely on the way each individual looks after himself and, although mild attacks of malaria may occur, there is no reason why the ordinary healthy person should not keep perfectly fit in the country. Long days and late nights are not conducive to good health in Nigeria any more than they are anywhere else in the world.

The system of Government in Nigeria is at first sight a little complicated and would be an awkward question to answer in an examination paper. First of all, let it be realized that there is a Colony and Protectorate of Nigeria, the former being limited to the town of Lagos and its environs, and the latter comprising the rest of the country. For purposes of administration, the mandated territory of the Cameroons is included in the Protectorate. Then the Protectorate is divided into two portions, the Northern Provinces and the Southern Provinces, each under the control of a Lieutenant-Governor; these two and the Administrator of the Colony being responsible to the Governor of Nigeria, whose headquarters are at Lagos. The Governor is assisted by an Executive Council, which is composed of some of the leading officials in the country. General legislation is in the hands of a Legislative Council, which meets regularly once a year and at other times when required. This Legislative Council is composed partly of official and partly of nominated members, the former being in a majority. The nominated members are partly European and partly African. The Legislative Council has no power to make laws for the Northern Provinces of Nigeria; the Governor having sole control in this respect. The power of taxation in the Northern Provinces has been left with the Governor and the scope of the Legislative Council in financial affairs is confined to the Colony and Southern Provinces; except that the sanction of the Council is required for all expenditure out of the funds and revenue of the central Government which is incurred in the Northern Provinces.

Indirect rule through the existing native administrations is the policy throughout Nigeria and this has to be applied in varying degree according to the power and reliability of the various rulers. Thus in the north, where the large Emirates with well-established Government were already in existence, the policy has been to support the existing organizations, at the same time exercising a considerable

measure of control. The Residents and Political Officers in each Province assist the Emirs to expand and improve their existing institutions, at the same time protecting the people of the Province, where necessary, from corrupt practices at the hands of the native officials. In the greater part of the south, where there are few large native organizations and the government is mainly in the hands of small native chiefs, the British rule is necessarily of a more direct nature, though the policy here also is to build up native administrations where the people have shown themselves capable of self-government. Rather anomalously, the Oyo Province, situated in Southern Nigeria, provides an example of one of the most advanced native administrations.

It is natural that in Nigeria, as in all large semi-developed countries, one of the great problems to be faced is that of communications. Roads and railways must be constructed, both to facilitate administration and to convey the produce of the country cheaply to the sea-ports. In a tropical country, with its torrential rainfall and swirling rivers, the construction of such roads and railways is no easy matter, and their maintenance when constructed is more difficult still. The cost too is high. In Nigeria the problem has of recent years been tackled with energy and foresight and most of the main centres can now be reached either by rail or by motor road at anytime of the year. The general trade depression of recent years has, however, had its effect on Nigeria and the trade of the country has not yet responded to the large sum of money spent on communications. Intensive development has, therefore, been temporarily checked, but there can be little doubt that before long it will be renewed with redoubled energy.

Readers of this article will no doubt be anxious to hear something about life in Nigeria as it affects the soldier. The Nigeria Regiment, as will be seen from the Army List, forms part of the Royal West African Frontier Force, and consists of a battery of light artillery, 4 infantry battalions, a light mortar battery, a depot and a signal school. I may here mention that the Royal West African Frontier Force has recently been honoured, by His Majesty The King consenting to become its Colonel and by the grant of the prefix "Royal".

The Governor of Nigeria is *ipso facto* the Commander-in-Chief of the Nigeria Regiment and the Regiment is in all respects a Govern-

ment Department. It makes out its own estimates and receives its own annual vote in the same way as other Government Departments. European personnel serving with the Regiment are seconded to the Colonial Office for the period of their service and receive special rates of pay.

The whole of the officers of the Nigeria Regiment are European and there are also a proportion of European warrant and non-commissioned officers. Generally speaking those appointments in which a knowledge of clerical work is required are filled by Europeans. There is also a very nearly complete establishment of native non-commissioned officers, so that in certain appointments, *e.g.*, regimental and company sergeant-majors, Europeans and natives work side by side.

The native troops are now recruited almost entirely from the northern tribes. It must be realized that, as in India, a large proportion of the population of Nigeria are of non-fighting characteristics. Up to a few years ago the Yorubas of the south provided a fair number of recruits, and even now some of the best N.-C. O.s, especially in the Southern Battalions, are of Yoruba descent. Latterly, however, owing partly to the establishment of the regimental depot in the north and partly to the increasing wealth of the natives of the south, recruiting among the Yorubas has practically ceased.

Anyone who has soldiered in Nigeria will, I think, agree that the native soldier is a particularly attractive individual. Easy to lead and of a cheery disposition, he is exceedingly quick to detect faults, and will in his own mind sum up his officers and N.-C. O.'s in a very short space of time. He is as a rule exceedingly keen on his profession and the standard of efficiency is high throughout the regiment. He is possessed of good manners and becomes devoted to his European leaders, provided the latter take the trouble to study his characteristics.

An officer who is contemplating leaving his British regiment will often ask himself whether he will suffer in professional ability from a few years abroad. I think the answer is that the British Army must be prepared to fight anywhere in the world and not only on the plains of Flanders. The officer who goes to a country like Nigeria will get wide and varied experience which he will not often get with his British unit. He will get greater responsibility. He may, for instance, find himself sent off for some hundreds of miles in charge of a convoy of animals or carriers, or he may be in charge of an out-

station, where he will be responsible for all stores, upkeep of buildings, etc. As O. C. Troops, he will also hold an important position in the social life of the station. Many officers have told me that, owing to shortage of clerical staff, they find they have to go into much greater detail than they normally would with their British unit, and that they thereby obtain a much deeper knowledge of interior economy than they previously possessed.

The importance of keeping officers up-to-date as regards modern developments is not lost sight of in the training, and special assistance is given to those who are working for Staff College and Promotion Examinations.

Financially an officer or B. N.-C. O. should be quite well off in Nigeria. An officer receives an outfit allowance on first appointment which will cover the greater part of, though probably not all, his initial outlay. He should with reasonable care be able to save quite a fair sum each tour. The actual amount he saves will of course depend to a certain extent on the part of the country in which he happens to be stationed. Living in Lagos, for instance, is naturally more expensive than living in a distant bush station.

All Europeans are housed free of cost and, if they occupy a "bush" house, which is unfurnished, they receive a special allowance in lieu of furniture, etc. The policy is to build permanent houses for all Europeans and this has already been done at most of the larger stations, *e.g.*, Kaduna, Kano, Calabar and Lagos.

Europeans receive free passages to and from Nigeria, the period occupied on the journey not being included in the period of leave.

Tours are normally of 18 months duration, but this period may be curtailed at the discretion of the commandant. The individual contracts for one tour at a time and may, if recommended, return for a second and third tour provided he does not exceed a period of six years consecutive or ten years total Colonial service.

In the larger stations officers' and B. N.-C. O.'s messes are established; these are large buildings and of a type suitable to the country. New arrivals, who expect to find nothing but primitive "bush" houses, are often surprised to find themselves in a well-established mess again.

Perhaps the side of Nigerian life which will appeal most to the British officer is the facilities for sport, at a reasonable cost, which it

offers. It may be said that the two games of the country as far as the soldier is concerned are polo and tennis, and of these the former, where it can be played, takes precedence. Polo is played at most of the military stations, except those where the keeping of ponies is debarred by the tsetse fly. Ponies are bred mainly in the northern parts of the country and therefore they are cheaper in the north than in the south. In the north a reasonably good station polo pony can be obtained for about £15, while a raw pony can probably be bought for £10 or £12. Three polo cups are competed for each year in addition to any local tournaments which may be held in each station. The greatest keenness is shown over these tournaments and they provide topic for conversation in the messes for long periods before and after they take place.

Race-meetings also are a feature of the country and each of the larger centres now has its own race-course with one or two meetings each year. Officers are encouraged to ride at these meetings and there are always one or two events in which they can enter their own ponies if they wish to do so.

Tennis is played at all stations on hard courts except at Lagos where there is an excellent club with grass courts.

Cricket and hockey can be played at certain stations.

At most stations there is a golf course, the quality of which varies with the seasons of the year. In the rains the grass is difficult to keep within limits, while in the dry weather even the worst golfer may become optimistic as to the length of his drive.

There is shooting to be had in Nigeria, both big game and bird. Big game, though not to be compared to the East African fauna, are yet fairly abundant. They are, however, difficult to kill owing to the density of the bush and the consequent short visibility, and the hunter must be prepared for a considerable amount of real hard walking before he can expect to get a good bag. The most common animals in Nigeria are the haartebeeste, the roan antelope, the kob and the water-buck. Elephant and lion are to be found in small quantities and a bush-cow (small buffalo) can generally be obtained by those who care to go and look for one. The bush-cow is a dangerous animal, especially when wounded, and extra precautions should be taken when hunting him.

Although big game shooting can be obtained in the vicinity of certain stations, it should not be thought that this is universally

the case. By taking 21 days local leave, however, to which each Government official is entitled each tour, anyone who wishes to do so can get at least one good shoot.

Squash racquet courts have recently been built at several stations.

Service in Nigeria also offers facilities for travel for those who like to avail themselves of it. During recent years officers have travelled across country to Dakar on the Atlantic, Algeria on the Mediterranean, and to Khartoum. Officers are encouraged to make these journeys provided they do not interfere with their subsequent service in Nigeria.

In conclusion, I will confidently say that an officer or B. N.-C. O. of the right type, provided his health is reasonably good, will enjoy his time in Nigeria. It is idle to pretend that Nigeria is a bed of roses. It is not, and never can be, a really good country for a white man to settle in. Yet it is far from being "The White Man's Grave" which it is often thought to be. There are difficulties to be faced and overcome, but that all adds to the interest of the country. Above all, there is a man's job to be done there by anyone who wishes to do it, whether he be soldier, administrator or other official.

A CRITICAL STUDY OF THE BATTLE OF NEUVE CHAPELLE.

By :

CAPTAIN O. G. BODY, D. S. O., R. A.

The battle of Neuve Chapelle deserves very close study by all students of tactics. The subsequent attacks up to the end of the Great War were based on the methods which were beginning to develop in the First Army of the B. E. F. at this time. New conditions had been introduced into the preparation and conduct of offensive operations, very different from anything which had been previously contemplated in the pre-war training of the British Army. Movement had formerly been the chief factor in our training—the approach march, the engagement of protective bodies, the deployment for battle and the gradual building up of the firing line. These matters were all superseded by the problem of the deliberate attack launched from a forming up line already established in close proximity to the enemy.

There are many who would have us believe that wars of the future cannot be conducted by the old and costly methods of the Great War. There is a tendency to condemn those methods *in toto*, and to dismiss the study of the so-called trench warfare, to which they gave rise, as unnecessary mental lumber. A certain school of military thought, rather than study the past, prefers to believe in the dawn of a completely new era, and is confident that armoured fighting vehicles will bring us back to wars of movement once again. The tank has improved out of all knowledge since 1918, but it is doubtful if its ascendancy over other arms is as great now as it was then. At that period of the war, weapons had not been designed, nor training evolved to combat the tank, it had come as a complete surprise to the enemy and was enjoying the prestige of novelty. But, apart from these arguments, the fundamental fact must be admitted that the effort of modern war is so terrific that it can only be spasmodic. The adoption of each new mechanical device tends to tie us more and more to the factory and the workshop, and therefore to periods of inactivity while the whole rearward service of war are organised. The tank may well be an asset in breaking through lines of defences, but it cannot provide a guarantee against the onset of conditions such as those which arose on every front on which modern armies were employed during 1914-18.

The advent of armoured fighting forces must not tend to kill interest in the problems of the deliberate attack. We must rather look to perfect the methods which we began to develop in the Great War, and to apply new arms and weapons to the solution of the problems with which we were there confronted. The conditions of deliberate attack will be those under which the decisive battles of the future will be fought.

The evidence of the great war is that if attacks are properly mounted it is quite possible to break through deep and continuous lines of defences by frontal attack. If the early attacks in France are examined in the light of what we now know, we realize at once that they were bound to fail. There was something radically wrong with the attack doctrine, which led to failure time and time again.

On the 21st March 1918, the Germans demonstrated to us that, with an inferior air force and no tank arm, it was quite possible to break the front with artillery and infantry alone. They had perfected a new tactics, which was in its infancy at Neuve Chapelle, at Loos and on the Somme. We, too, had learnt the lesson by August 1918. These same tactics reinforced by the power which modern armament has conferred on the attack deserve the closest study, and will give the true picture of the modern battlefield.

The Plan.

The intention was "to surprise the Germans, carry them right off their legs, and push forward at once to the Haute Pommerau—Aubers Ridge."

The battle was to begin with the capture of Neuve Chapelle as a distinct operation. This included the assault of the German front line trenches, the storming of the village itself and the consolidation of Smith Dorrien trench to the east of it.

The bombardment was to begin at 0730 hours, an hour after sunrise. Thirty-five minutes were to be allotted to the first phase of the bombardment to allow for wire cutting, etc. At 0805 hours, the artillery was to lift to the next objective—Neuve Chapelle village. At this hour also, immediately the artillery had lifted, the infantry was to leave the front line trenches and assault the German breastworks. Three infantry brigades were to take part in this attack (one from the

Indian Corps and two from the IV Corps) on a front of 2,000 yards. On reaching the line of the German support trench, some 200 yards] beyond the front trench, the leading troops of these brigades were to wait till the end of a further thirty minute bombardment of the village. At 0835 hours, the attack against the village was to be launched and the advance continued through it to Smith Dorrien trench. From this point onwards the operations were to assume more extensive proportions. The 2,000 yards gap was to be widened. This second stage of the attack was to consist of an offensive by the remainder of the Indian and IV Corps on the whole of the five mile front held by them. At a time to be decided by the mutual arrangement between the two corps commanders according to the situation, the whole of the two corps (less the three original assaulting brigades) would advance across the mile of flat country separating them from the Aubers Ridge, and thence on to the ridge itself. This second stage of the attack was to be supported by a further bombardment, particularly of various strong points about the Bois de Biez, Pietre, and Aubers village.

The successive objectives (*i.e.*, the German support line, the line of Smith Dorrien trench, and the eastern edge of the Bois de Biez to Aubers ridge) as they were captured, were to be put into a state of defence by the R. E., and used as rallying centres from which to resist possible counter-attack, or as intermediate lines of defence.

As regards numbers General Haig could scarcely hope for more favourable circumstances in which to take the offensive. Owing to the depletion of the German ranks on the western front for operations in Russia, only three and a half corps of the German Sixth Army faced six corps of the B. E. F. (First and Second Armies) then in France. Of these only the German VII Corps of two divisions lay opposite the six divisions of the First Army on a thirteen mile front. The Intelligence Section, G. H. Q., calculated that not more than 4,000 additional rifles could reach the Germans on the front of attack within twelve hours, that is by the evening of the first day of the battle, and a further 16,000 by the evening of the second day. These estimates proved very accurate. The initial attack of the three infantry brigades was opposed by only one and a half battalions of German infantry. From the point of view of numbers, never did the B. E. F. attack in France under more favourable circumstances.

Criticism of the Plan.

The intention was "to surprise the Germans, carry them right off their legs, and push forward *at once* to the Haute Pommerau—Aubers Ridge," and yet the battle was to begin with the capture of Neuve Chapelle as a distinct operation. The plan had already lost sight of the intention.

Although surprise was the principle on which reliance was to be placed, the battle was to open with a preliminary operation—an attack on a 2,000 yards front penetrating to a depth of approximately 1,000 yards. On completion of this phase, and, after it had been well advertised, the main attack was to be developed by the remainder of the Indian and 4th Corps on the whole of the five mile front held by them. Such a plan, to execute such an intention, stood no possible chance of success whatever.

Surprise must always be associated with secrecy and speed. Secrecy was well kept. Surprise was achieved. Failure was due almost entirely to the fact that the plan and subsequent orders did not guarantee the essential speed. All attacks achieve some degree of surprise but the effect of surprise in attack gives an advantage which is gradually declining. A closer consideration of this principle, however, must be made with reference to the factor of speed, *i. e.*, time and space, if its tactical reactions in the attack are to be appreciated.

In theory, the attacking troops must overrun the forward battalions of the defence more quickly than the defending brigade commander can bring up and put in his reserve battalions. Similarly they must overrun the enemy brigade areas before the defending divisional commander can bring up and deploy his divisional reserve. If it is estimated that the defending brigade commander can bring up and deploy his reserve battalions in one hour, then the attacking infantry must aim at accomplishing something more than to overrun the defending forward companies in that time. This is an ideal at which to aim, and tactical principle which is not always appreciated in fixing objectives and timings, nor does it receive the consideration it deserves in putting plans of attack into execution.

In this instance, although all was staked upon surprise, the leading *brigades* on very narrow frontages were set objectives to a depth of approximately 1,000 yards and no definite orders were given prior to the attack for further advance. At Cambrai the leading *battalions*

were directed on to objectives 2,000 yards within the enemy line and the leading *brigades* to a general depth of 4,000 yards.

Having frittered away the advantage of surprise by a preliminary attack on Neuve Chapelle, the main attack was to be launched against the Aubers Ridge "at a time to be decided by mutual arrangement between the two Corps Commanders." Here was another flaw in the plan, which precluded all possible chance of success.

The staffs of the higher formations were under the impression that the battle could be resumed on some short and simple message. It was realized later in the war how carefully all artillery and infantry timings had to be co-ordinated. These details cannot be arranged during the heat of battle, and yet on this occasion the main attack was to be launched under arrangements made on the spur of the moment. In the outline given below it will be seen how this provision of the plan led to chaos and failure.

The grouping, command and organization of the forces employed in this attack should be noted.

Only three brigades attacked in the first instance. These three brigades were drawn from separate divisions, one from the Meerut division and two from the 8th Division. These divisions were drawn from separate corps. In consequence, to co-ordinate the attack you get right back to army—a very undesirable state of affairs for an attack which was being launched on a 2,000 yards front.

Such a chain of command meant reference through many channels and again slowed down the whole operation. When reliance is being placed upon the principle of surprise, then command must be decentralized, and decisions normally taken by higher authority must devolve on lower command. Even had no reliance been placed on this principle the organization of command was far too heavy for an operation of this kind. Never was it to assume proportions too big for one corps commander to handle. The plan which was intended to carry the Germans right off their feet also legislated for the consolidation of three separate and close objectives, and even of the German front line trench approximately 300 yards in front of our own. This was not at all in accordance with the spirit of the original intention.

The operation orders which gave effect to this plan will now be considered.

1ST ARMY OPERATION ORDER NO 9.

Aire.

8th March 1915.

1. The Expeditionary Force will resume the offensive on 10th March.

The 1st Army will attack north of the La Bassee canal the 2nd Army and Xth French Army will co-operate by offensive action on their respective fronts. Our cavalry will be held in readiness to co-operate in the attack of the 1st Army.

2. The G. O. C., 1st Army intends to force the enemy lines in the vicinity of Neuve Chapelle and drive back any hostile forces from the line Aubers—Ligny le Grand, with the object of cutting off the enemy's troops which are now holding the front between Neuve Chapelle and La Bassee.

3. (a) *The artillery will complete such registration as is necessary by 7-30 a.m. at which hour the preliminary bombardment will commence. At 8-5 a.m. the infantry assaults on the enemy trenches will be carried out simultaneously at all points. The artillery fire on Neuve Chapelle will be maintained until 8-35 a.m. when the village will be assaulted.*

(b) *The attack will be carried out by the Indian Corps and 4th Corps in accordance with special instructions which have been issued to Corps Commanders. The left of the Indian Corps and the right of the 4th Corps will be directed on the general line—road junction at the southern end of Neuve Chapelle—La Cliqueterie Farm.*

The capture of Bois du Biez is assigned to the Indian Corps and of Aubers and La Cliqueterie Farm to the 4th Corps.

Allotment of roads west of our lines of trenches will remain as at present ; east of this line the road junction Pont Logy—road junction south end of Neuve Chapelle—road junction north of the Bois de Biez and all roads to the north are allotted to the 4th Corps.

(c) The 1st Corps will assault the enemy lines north-east of Givenchy under special instructions which have been issued to G.O.C., 1st Corps, and will take advantage of any weakening or retirement of the enemy in its front, north of the canal, or on the right of the Indian Corps by assuming a vigorous of offensive in the direction of Violaines.

(d) The Canadian Division will, simultaneously with the above attacks, co-operate by a fire attack along its entire front, and will be prepared to assume the offensive under orders from 1st A. H. Q.

4. The 1st, 4th and Indian Corps will each respectively detail one brigade as Army reserve under orders of G. O. C., 1st Army.

5. 1st Army Headquarters Report Centre will be established at Merville at 6 p.m. on 9th March.

Issued at 9 p.m.

General Staff, 1st Army.

Criticism of 1st Army Operation Order.

“The object of an operation order is to bring about a course of action in accordance with the intention of the commander, and with the full co-operation of all arms and units.”

The 1st Army Commander decided to attack Neuve Chapelle with troops drawn from two separate Corps. The 1st Army was the ultimate co-ordinating authority which could ensure co-operation between these two Corps. The all-important part of the 1st Army operation order, therefore, is that part which is written with the object of ensuring the co-operation of the two corps in question, namely the Indian Corps and the IVth Corps. The only part of the order which applies to this matter is the portion of para. 3 in italics.

The intention of course is also important in connection with the study of the tactics of this attack, but there is little of interest in the remaining portions of the order. These two points only therefore will be dealt with *i. e.*, the intention and the portion of para. 3 in italics.

It is interesting to note that the order makes no mention whatever of the intention to surprise the enemy—a serious omission. The intention has also been confused by appending to it an entirely new “object” *i. e.*, “to cut off the enemy’s troops which are now holding the front between Neuve Chapelle and La Bassee.” It is difficult to understand how the capture of the line Aubers-Ligny le Grand could hope to “cut off” the enemy’s troops holding the front between Neuve Chapelle and La Bassee. Apart from this consideration, however, plans and orders should not multiply “objects” and “intentions” in this way. “Object” and “intention” are to all intents and purposes synonymous. A dictionary will show both defined as “purpose” or “aim.”

The intention paragraph of this order would have been better expressed as follows :—

THE FIRST ARMY WILL CAPTURE THE LINE AUBERS—LIGNY LE GRAND BY A SURPRISE ATTACK TO BE DELIVERED AT A TIME AND DATE TO BE NOTIFIED LATER.

Something more than that portion of the order under discussion was necessary to ensure co-operation between the two Corps. The Army plan had decided upon the high ground Haute Pommerau-Aubers Ridge as the main objective, with two distinct and separate intermediate objectives (the German support trenches and the line of Smith Dorrien trench). Co-operation is primarily effected between formations in deliberate attack by the definition of, and the timings on various objectives. When successive objectives are given it is essential to give the time for the resumption of the advance after the capture of each in order to co-ordinate the advance of formations and units and to synchronize the artillery fire with the movement of the infantry.

Objectives are very badly defined in para. 3 of the operation order. Also orders to the artillery, objectives and boundaries are all contained in the same paragraph. Timings only include those for the commencement of the advance and the assault on Neuve Chapelle village. Although the main attack was really to develop after Neuve Chapelle was captured and it was precisely at this point where the battle required careful co-ordination and handling, yet from this point onwards the attack was to look after itself.

As expressed in the original plan of the 1st Army, the advance after the capture of Smith Dorrien trench was to be resumed at a time to be decided upon by the mutual agreement between the Corps Commanders. This was admittedly a poor arrangement, but when once decided upon it should have been included in the order, as omission of all reference of this very important timing makes the order ring untrue. There is a grandiose intention which the execution paragraph of the order in no way completes and which “fizzles out” with indefinite orders for the taking of Neuve Chapelle only. The intention exceeds the period covered by the order and the execution paragraph when carried out will leave the intention still unfulfilled.

The method of co-ordinating attacks by detailing intermediate objectives and giving timings for the resumption of the advance from each as it is secured, was not appreciated at this period of the war

as it was later. Little was understood as to the time orders took to get to units or the time taken to pass fresh units through. Owing to the fact that it takes a longer time to pass through a fresh battalion than it takes to pass through a fresh company, and a fresh brigade than a fresh battalion, it is also necessary for high command to allot the nature of the unit or formation which is assigned to the capture of a given objective. Unless this is done, some commanders may attempt to leap-frog brigades on a given objective, while others are passing through battalions. In consequence the whole attack becomes unco-ordinated and, furthermore, a general artillery programme cannot be evolved to suit the occasion, *i. e.*, a high formation such as a corps may have to detail objectives for the leading battalions, etc.

F. S. R. II Section 68 states.—

“The higher commander exercises general control over the attack by allotting tasks to the formations taking part in it and by co-ordinating the detailed plans of their commanders.

In the encounter attack, owing to lack of accurate information, it will generally only be possible and advisable for the commander of a formation to allot general and distant objectives, keeping to subordinate commanders the allotment of intermediate objectives.

In the deliberate attack, when fuller information as to the enemy's defences will be available, co-ordination by the higher commanders may be best effected by allotting intermediate objectives.”

The objectives should have been more clearly defined. Timings should have been given at which the advance was to be resumed from the various objectives, and the nature of the unit or formation allotted to the capture of the successive objectives should also have been stated.

The orders to the artillery are usually all-important in ensuring co-operation (the *raison d'être* of all orders) but in this instance no artillery was under the command of Army. The orders to the artillery required are only such as will ensure secrecy. “The artillery will complete such registration as is necessary by 7-30 a.m. at which hour the bombardment will commence” as stated at the beginning of para. 3 is all that is necessary. If objectives and timings are clearly stated, those under whose command the artillery is operating will do the rest.

The execution paragraph of the operation order should have opened on the following lines :—

"The main attack will be carried out by the Indian and IVth Corps."

1st Intermediate Objective .. The enemy support line approximately 300 yards in rear of his front line. To be captured by the leading battalions. The advance from the RED LINE to be resumed at Z plus 30 minutes.

2nd Intermediate Objective.. The line of Smith Dorrien trench
THE BLUE LINE. to be captured by the leading
brigades. The advance from
the BLUE LINE to be resumed
at Z plus 180 minutes.

Final Objective .. The line of the high ground Haute
THE GREEN LINE. Pommerau-Aubers Ridge to be
 captured by the leading divi-
 sions.

CORPS ORDERS FOR THE ATTACK.

The following are the Indian and IVth Corps orders for the attack, based on the 1st Army Operation Order given on page 198.

INDIAN CORPS OPERATION ORDER NO. 56.

Battle of Neuve Chapelle. 9-3-15.

1. The Expeditionary Force is resuming the offensive on March 10th and the Xth French Army is co-operating. The G. O. C., 1st Army intends to force the enemy lines in the vicinity of Neuve Chapelle and drive back any hostile forces from the line Aubers—Ligny le Grand, with the object of cutting off the enemy's troops now holding the front Neuve Chapelle and La Bassee.

2. The 4th and Indian Corps are to capture Neuve Chapelle and to push on east of that village. The dividing line between the two corps is :—Road junction at southern end of Neuve Chapelle—La Cliqueterie Fe. The capture of the Bois de Beiz is assigned to the Indian Corps and of La Cliqueterie Fe to the 4th Corps.

The 1st Corps is assaulting the enemy's lines north-east of Givenchy.

3. The Indian Corps will attack vigorously from the front of the La Bassee—Estaires road between the following limits :—Road junction in square S. A. d. and the left of the line held by the Indian Corps. The objectives are successively.

- (a) Enemy's front and support trenches.
- (b) Road from Port Arthur round the east side of Neuve Chapelle.
- (c) East edge of the Bois du Biez.
- (d) Line through Le Hue and Ligny Le Grand to La Cliqueterie Fe (exclusive).

4. The attack will be carried out by the Meerut Division reinforced by the artillery of the Lahore Division. It will also be assisted by No. 1 Heavy Group Artillery under orders of 1st Army.

5. The artillery will complete such registration as is necessary by 7-30 a.m. at which hour a bombardment will commence in accordance with special orders as to times and objectives. At the hour fixed for the assault, the artillery will not cease fire but will lengthen range and fuze.

6. The infantry will assault the enemy's trenches at 8-5 a.m. under detailed instructions already communicated to the Meerut Division. The artillery fire on Neuve Chapelle will be maintained until 8-35 a. m. when the village will be assaulted.

7. The Lahore Division (less artillery and the Ferozepore Bde.) will be disposed as under on the date of the assault and will remain in a state of constant readiness :—

Jullundur Bde. in area Vielle Chapelle-La Couture clear of the road by 7-30 a.m.

Remainder of Division in area La Tombe Willot—Les Lobes-Lestrem (exclusive) by 10 a.m.

8. The Ferozepore Bde. will remain at Callonne and form part of the 1st Army Reserve.

9. Supply depots for use in emergency have been established at Richebourg St. Vaast and La Couture for 6,000 British and 10,000 Indian rations, half at each place.

10. Reports to La Cix Marmuse.

Issued to signals at 9-15 a.m.

IV CORPS OPERATION ORDER NO. 10.

Battle of Neuve Chapelle.

7th March 1915.

1. In accordance with instructions received from the General Officer Commanding 1st Army, the IVth Corps and Indian Corps will carry out a vigorous attack on the enemy on a date and at an hour to be notified later. The village of Neuve Chapelle will be attacked and captured by assault after which a further advance will be made to gain the line Aubers—Le Plouich—La Cliqueterie Ferme—Ligny Le Grand.

2. The attack on Neuve Chapelle will be carried out in two stages by the 8th Division. Detailed instructions have already been communicated to G. O. C., 8th Division.

1st Objective .. The enemy front and support trenches opposite "B" lines.

2nd Objective .. Eastern edge of Neuve Chapelle on the right to the Orchard and the Moated Grange on the left. The point of junction with the Indian Corps will be at the south-east corner of the village.

3. For the attack on the 1st objective, namely, Neuve Chapelle village, the artillery of the 7th and 8th Divisions, less 4·7 heavy batteries will be grouped under the orders of the G. O. C., 8th Division. The 4·7 batteries of the 7th and 8th Divisions together with certain heavy batteries will form a group under orders of 1st Army.

A simultaneous attack on Neuve Chapelle will be carried out by the Indian Corps from the south.

4. When Neuve Chapelle village has been captured and made good, the 7th and 8th Divisions supported by the Indian Corps on their right will be ordered by the Corps Commander to press forward to capture the high ground Aubers—La Cliqueterie Ferme and Ligny Le Grand.

5. When the 7th Division is ordered by the Corps Commander to move forward to the attack, the following artillery units will come under orders of the G. O. C., 7th Division ;

The 81st Siege Battery of the 7th Siege Brigade 6" How.

4th Siege Battery 6" How.

The 59th Battery, 7th Siege Brigade 6" How.

31st 4·5 Howitzer Battery.

111th Heavy Battery, R. G. A. (4'7")

A, F, O, Q, T, U and Z Batteries, R. H. A.

One section pack artillery attached to 23rd Ind. Brigade.

6. The 20th Brigade will be held in Corps reserve and will not advance beyond the Rue de Bacquerot without direct orders from the Corps Commander.

7. The Canadian Division will maintain its position and will open artillery, rifle and machine gun fire on the enemy's position in their immediate front, and on Fromelle village, in order to hold the enemy to his ground, and prevent reinforcements being sent to Aubers.

8. IV Corps Report Centre will be at Pont Levis, half a mile west of Estaires after 6-0 a.m. on the morning of the attack.

Issued at 11-50 p.m.

*Brigadier-General,
General Staff, IVth Corps.*

Criticism of Corps Orders.

1. These orders will not be criticised in detail. To write good and convincing orders based on the 1st Army order was impossible. The lack of decision and the indefinite character of the order was magnified in both the Corps orders.

2. In both these orders there is nothing worth the name of an "intention." IVth Corps order certainly contains none. In the Indian Corps order the opening sentence of paragraph 2 might possibly be called an "intention" (*i.e.*, 4th) and Indian Corps are to capture Neuve Chapelle and to push on east of the village, but it is very vague, if read as such. In both these two orders information, intention and execution paragraphs are hopelessly muddled together.

3. In comparing these orders it is interesting to note that the Indian Corps has allotted four objectives and the IVth Corps only two. In fact the IVth Corps order merely legislates for the capture of Neuve Chapelle and goes no further. The main phase of the battle is dismissed with the information that "when Neuve Chapelle has been captured and made good, the 7th and 8th Divisions supported by the Indian Corps on their right will be ordered by the Corps Commanders to press forward to capture the high ground about Aubers—La Cliqueterie Ferme and Ligny Le Grand."

The Indian Corps order does make some vague attempt to legislate for the subsequent stages of the battle after the capture of Neuve Chapelle, but does not give the information that troops are to wait on the second objective until ordered to resume the advance by the Corps Commander.

In both orders the assault of the German front line and support trenches was to begin at 8-5 a. m. and the advance on Neuve Chapelle at 8-35 a.m. After this everything was left in the air. The course of the battle went wrong, precisely where, from the academic study of the plan and orders issued, it could be expected to go wrong. Up to the capture of Neuve Chapelle village and the line of Smith Dorrien trench the attack was a brilliant success. After this stage of the battle all was doubt and confusion, which is little to be wondered at after a critical study of the orders issued.

Brief description of the course of events on March 10th.

The initial attack was launched by the—

Garhwal Brigade (Meerut Division, Indian Corps) on right,
25th Brigade (8th Division, IVth Corps) in centre,
23rd Brigade (8th Division, IVth Corps) on left.

These brigades were to complete the capture of Neuve Chapelle and establish themselves on the second objective (Smith Dorrien trench).

After the capture of the Smith Dorrien trench fresh troops were to pass through and carry on the attack :—

Dehra Dun Brigade (Meerut Division, Indian Corps) on right,
24th Brigade (8th Division, IVth Corps) in centre,
21st Brigade (7th Division, IVth Corps) on left.

The leading brigades were to attack as follows :—

Garhwal Brigade .. Frontage 600 yards, 4 battalions, in line one
in reserve.

Left.

Right.

2/39 Garhwal. 2/3 Gurkhas. 2/Leicestershire. 1/39 Garhwal.
3/London (Reserve).

The leading battalions were intended to push on to second objective.

25th Brigade .. Frontage 400 yards (with gap of 600 yards
between it and right of Garhwal Bde.).

Two battalions forward and two in reserve.

Left.

Right.

2/Lincolnshires.

2/R. Berkshires.

1/R. Irish Rifles.

2/Rifle Brigade (Reserve).

Reserve battalions were to leap-frog on first objective.

23rd *Brigade* .. Frontage 400 yards.

2 battalions forward. One in support and one in reserve.

Left.

Right.

2/Middlesex.

2/Scottish Rifles.

2/Devonshires (Support).

2/West Yorkshires (Reserve).

The leading battalions were intended to push on to the second objective Smith Dorrien trench.

The attacking brigades varied in their composition. The Gharwal Brigade consisted of five battalions. The 24th Brigade consisted of six battalions of which only three were available for the attack. (The 2/Northamptonshires and the 4/Cameron's were holding the line, whilst the 5/Black Watch was providing carrying and stretcher parties).

There was no uniform system of grouping battalions within brigades and all were differently organized. Besides this there were a variety of different organizations within battalions. Some battalions attacked with four companies in line and no battalion reserves, others attacked with two companies forward and two in reserve, etc. All this lack of system was bound to lead to varying rates of advance and lack of co-ordination and co-operation. It is difficult enough to cope with the disorganization which the enemy reactions will inflict, but there is no reason to start with such lack of uniformity in system and inflict such a state of affairs on yourself. This mistake can be definitely traced to the fact that in the original orders objectives were ill-defined ; no timings were given for the resumption of the advance from the successive objectives, and the nature of the unit or formation which was intended to secure the various objectives was not stated in the Army orders.

The advance of the Garhwal Brigade.

This advance was successful except on the extreme right where the 1/39 Garhwal Battalion got into difficulties. This battalion bore right handed and its attack fell on a part of the German defences which

were unprepared for the assault by previous bombardment. The necessity for the bombardment to overlap the front of attack by a liberal margin should have been apparent from the very outset.

The three remaining battalions went forward with less opposition. They reached the support trench, the first objective, fifteen minutes after zero. Without waiting for the completion of the second phase of the bombardment, the period of thirty minutes fire on the village itself, the leading companies pushed on. By 0900 hours they had captured 200 prisoners and five machine guns and secured the second objective. No effort was made to push out posts in front of this objective.

Owing to the fact that the 1/39 Garwal Battalion was held up on the extreme right there was a gap on the right rear of the Leicestershire Battalion, and some enemy infiltration in rear of the successful attack. On demand of the O. C., 1/39 Garhwal Battalion for reinforcements, the 1/Seaforths of the Dehra Dun Brigade were sent forward and two companies of the 3/London. This was a mistake as it involved a fresh brigade in the fighting and broke the organization of a fresh formation which was required later in the day to carry on the attack to the final objectives.

The advance of the 25th Brigade.

The leading battalions, advancing in four lines of companies, crossed "No Man's Land" with few casualties. They reached the first objective, the German support trench, at 0820 hours and there halted. Whilst the artillery were carrying out the second phase of the bombardment the reserve battalions moved forward into position behind the captured line. At 0835 hours, as soon as the second phase of the bombardment was complete, the 2/Rifle Brigade and 1/R. Irish Rifles passed through the Berkshire's and Lincolnshires. They moved in artillery formation, four lines of small columns, each of half a platoon. The 2/Rifle Brigade entered Neuve Chapelle at 0850 hours and pushed on to Smith Dorrien trench, gaining touch with the Garhwal Battalion on their right. The Royal Irish Rifles on the left reached the Armentieres Road almost simultaneously with the Rifle Brigade. They had, however, outstripped the advance of the 23rd Brigade on their left and received heavy casualties from German machine guns enfilading this flank. Nevertheless, by 0900 hours, they had occupied the Road Triangle and taken up a position on its eastern side in

touch with the 2/Rifle Brigade. They then swung back a company to guard their left flank.

The 25th Brigade had now reached its objectives. Lt.-Colonel Stephens, commanding the 2/Rifle Brigade, sent back word that there was little sign of the enemy on his immediate front, and asked to be permitted to advance further. A reply was received that the 23rd Brigade was held up, and until it could get forward no further advance was practical on the front of the 25th Brigade.

The advance of the 23rd Brigade.

On the left of this brigade the bombardment was a failure owing to the late arrival of the batteries concerned, and immediately the Middlesex left their trenches they were met with an overwhelming fire. The three leading waves were almost annihilated and at 0830 hours it was decided to await further bombardment.

The assault of the 2/Scottish Rifles on the right was also roughly handled by enfilade fire from the German trenches holding out in front of the Middlesex. Advancing with its right on Sign Post Lane, the right company reached the German front line trench but the left company was stopped. The Devonshires were put in support of the Scottish Rifles and carried on the attack to the German support trench. Two companies of the West Yorks from reserve were also put in and the attack made a little further progress on the extreme right.

Final Result of the Attack of the Leading Brigades.

By 1000 hours the central battalions of the assault had broken through on a front of sixteen hundred yards, had captured Neuve Chapelle and reached Smith Dorrien trench to the east of the village. On the both flanks, however, the Germans continued to hold portions of the front trench; on the right, a section of two hundred and fifty yards in front of Port Arthur and on the left, a sector of about two hundred yards in front of the Middlesex.

Delay in ordering resumption of the advance.

At 1000 hours the situation was so favourable in the centre that a general advance should have been ordered. An opportunity had been created by the assault of the attacking battalions, but instead of taking it, higher command thought fit to use their reserves to force the battle exactly to accord with the preconceived idea as to how it was intended to develop.

The principle of reinforcing success was not adhered to. The 2/Rifle Brigade was anxious to advance and should have been ordered to push on. The Berkshires and Lincolnshires, now in reserve and immediately in rear, should have been pushed through the gap which had been made. This movement should have been supported right away back through the chain of command. This glorious opportunity to advance was strangled by the order "When Neuve Chapelle has been captured and made good, the 7th and 8th Divisions will be ordered *by the Corps Commander* to press forward, etc."

In this connection the pre-war German attack doctrine is of interest "A commander will never be able to make a battle conform to his preconceived ideas. The initiative of commanders even down to the smallest units and sub-units must be supported by those in rear. Out of small beginnings great developments will occur. Impetus to advance when it comes from the front must be supported as a matter of drill. Advanced units in contact with the enemy must feel and know that they direct the fight. Only then will those in front take risks and act with boldness and resource." *Bernhard.

The next phase of the battle was an attempt to remedy the failure on the flanks—note a serious failure and one which was more than compensated for by the great success of the attack in the centre.

Action of the Supporting Brigades.

The Dehra Dun Brigade of the Meerut Division and the 24th Brigade of the 8th Division were now prematurely drawn into the fighting. These brigades were originally intended to carry on the attack towards Aubers, but units from them got involved in trying to rectify the situation on the flanks.

The advance on the extreme right from Smith Dorrien trench on to the Bois de Biez could not possibly succeed until the front line trenches about Port Arthur and further to the south had been cleared. From a study of the original plan it was evident that this flank would soon be in the air.

* Our army at Neuve Chapelle had forgotten many of the old tactical principles which had been learnt in the Peninsular under the Duke of Wellington. The following is an extract from Sir Harry Smith's Biography Battle of Victoria.

"We knew so well how to support each other, that scarce had the French shown themselves on our flank when Cochrane's rear was supported, and we had such mutual confidence in this support that we never calculated on disaster, but assumed the boldest front and bearing."

If a unit or formation employed in an advance had to provide its own flank protection there must always be a tendency for it to swing towards the threatened flank. A formation, therefore, entrusted to seize a vital objective should be relieved of the responsibility of protecting its flanks. If troops are to establish themselves on a distant objective on a frontage of 2,000 yards then the attack must open on a front considerably greater than 2,000 yards. You must attempt to drive a salient. You cannot drive a lane through enemy defences. The original front of attack which was to form the base of the salient at Neuve Chapelle should have extended much further to the south if the early capture of the Bois de Biez was contemplated.

On the extreme right, the 1/Seaforth Highlanders were ordered to the assistance of the 1/39 Garhwal Rifles, but owing to delays it was 1300 hours before the leading companies of the Seaforth's crossed "No Man's Land" and 1415 hours before its advance southwards from behind the Leicestershires down the line of German trenches began. But again this advance was delayed. Reports led General Anderson to believe that the Seaforth's had already attacked and failed, so he ordered a fresh bombardment of the trenches. The Highlanders, realizing this, suspended the attack. The remainder of the Dehra Dun Brigade assembled about Pont Logy waiting orders to resume the advance. This was much too far back. They should have formed in attack formations in rear of the captured Smith Dorrien trench and got on to their starting line at the earliest possible moment.

The 24th Brigade also became involved on the left flank. A fresh bombardment of the front line trenches opposite the Middlesex came down at 1010 hours. A battalion of the 24th Brigade (the 2/East Lancashires) was now put in to fill the gap which occurred between the 23rd and 25th Brigades.

On completion of the bombardment the Middlesex occupied the German front trenches at about 1130 hours and one German officer and sixty-four other ranks surrendered.

Preparations were now made to attack the Orchard and the remaining companies of the West Yorkshires from the 23rd Brigade reserve, and the 1/Worcestershires of the 24th Brigade were sent forward to assist the Middlesex. These moves took time and when troops finally went forward found the Orchard was neither defended nor prepared for defence.

At 1300 hours therefore the situation on the left flank had been cleared up. Even at this hour had orders for a general advance on Aubers been issued it would have had every chance of success. No German reinforcements had so far arrived and the six German companies who were holding the line had all been killed or captured. The order for the resumption of the advance, however, was not given until two hours later.

The Corps Commander believed the Orchard to be one of the strong points of the German defences. He did not hear of its occupation until one hour after it occurred. Until this point had been captured he did not consider an advance feasible from the direction of the Moated Grange. The 7th Division was therefore kept inactive, although there was no opposition on this part of the front and the Commander of the Division (General Capper) begged to be allowed to push on.

On receipt of news that the Orchard was captured, IVth Corps Commander informed 1st Army that he proposed to order the advance to Aubers Ridge at 1400 hours. On informing Indian Corps Commander of this intention, General Willcocks replied that he would not be ready to order a general advance at that hour as he was involved in fighting in front of Port Arthur.

General Rawlinson, therefore, postponed his advance as he considered that the advance of the Indian Corps, to be effective, should be simultaneous with his own.

Resumption of the advance.

At 1445 hours, General Willcocks, realizing that the situation was far from being as unfavourable as he imagined, telephoned to IVth Corps that he had ordered the Meerut Division to push on to the Bois de Biez. General Rawlinson thereupon issued the following order. Handed in at 1453 hours. Received 1506 hours.

To 7th Division.

The IVth Corps will move forward from the line captured this morning towards Aubers. The 7th Division first objective Moulin du Pietre, second objective Rue d'Enfer, 8th Division first objective points 85, 86, 88, second objective Pietre. The leading troops of both divisions will cross the line 1, 2, 3, 4, 54, 31 at 1530 hours. Addressed 7th Division repeated 8th Division and 1st Army.

From IV Corps.

The message to 8th Division was identical, handed in at 1455 hours and received at 1504 hours.

Only half an hour was allowed for orders to get from Corps headquarters to the advanced troops. Even had such orders been given with adequate time for compliance the main attack on Aubers Ridge could not be expected to develop with success on a short message of this kind. IVth Corps orders which were issued prior to the attack had not legislated in any way for the continuance of the attack beyond the capture of Neuve Chapelle. The attack of a modern army requires something much more elaborate than a short message to ensure co-operation and success.

The story of Neuve Chapelle is not worth pursuing much further from an instructional point of view. Needless to say, none of the three brigades which were to resume the advance did so at 1530 hours. The short time which remained before darkness fell also precluded the chance of success.

On the right it was 1730 hours before the Dehra Dun Brigade finally moved forward across the Armentieres Road towards the Bois de Biez. While the Gurkhas were beginning to establish themselves along the western edge of the wood, German reinforcements were already entering it from the east.

The 24th Brigade (8th Division) advancing in the centre, also did not get going until 1730 hours. After an advance in waning daylight for about 500 yards units became hopelessly intermingled. Fire was opened from Layes Brook redoubt on the right and from the nameless cottages south of Mauquissart and the attack was brought to a standstill.

The 21st Brigade (7th Division) fared no better. At 1400 hours it got into position between the Orchard and the Moated Grange and pushed across the Armentieres Road through the left of the 23rd Brigade without a shot being fired. But at 1445 hours they were stopped by the division and ordered not to advance further until the 24th Brigade were in position and ready to advance on their right. It was not until 1800 hours that they started to move forward again.

Subsidiary Attacks.

Subsidiary attacks had taken place throughout the day to the right and left of the main attack and accomplished little or nothing. It was a great mistake to dissipate military effort in this way. An

additional brigade in line with the three which opened the main attack would have been far better value.

The 1st Corps on the right of the Indian Corps put over a subsidiary attack on the front of the 2nd Division with Chapelle St. Roche and Violaines as objectives. Two attacks by the 6th Brigade failed to secure the German front line trenches and incurred heavy casualties.

The 1st Division (1st Corps) attempted to cause a diversion by bombardment and bursts of rifle fire. At 1615 hours the Army Commander ordered three battalions from the 1st Guards Brigade to operate on the right of the Indian Corps and attack about Port Arthur. After these had been sent up, it was decided that it was inadvisable to carry out this attack and the battalions were sent back to their brigade.

North of the main attack the Canadian Division shelled the enemy defences in order to mislead the enemy as to the point of attack, and from time to time opened bursts of machine gun fire followed by cheering as if about to assault. Such methods avail little against disciplined troops. The effect of these subsidiary actions, if any, was not of long duration. By the afternoon the enemy had clearly established the limits of the main zone of operations and German units were sent in all haste to fill the breach opposite Neuve Chapelle. The 1st Army had succeeded in its intention to "Surprise the enemy," but failed to "carry them right off their legs and push forward at once to the Haute Pommerau—Aubers Ridge."

Conclusion.

The failure of this attack was not so much due to the difficulty of the task with which the troops were confronted, but rather to its novelty. The plan was unsound; the orders for the execution of the plan impracticable. No false conclusion must be reached that it was impossible for the commanders to break the line with the men and munitions at their disposal. There is not one scrap of evidence to this effect.

There can be no question as to the gallantry of the troops. The casualty list proves the ability of the attacking battalions to stand punishment. The failure of the attacks in the early stages of the war must be assigned to the fact that the full meaning of the new tactical

conditions which prevailed on the battlefield had not been grasped by the commanders. Sir Henry Wilson writing in his diary complains again and again of our inability "to mount an attack." He seemed to realize full well where the fault lay, although he did not go so far as to suggest a remedy. In the later stages of the war the fighting formations were controlled by commanders who had profitted by the experience of the older men, and who, for the most part, had commanded fighting units in the attack and could bring practical experience to bear in solving the problem of giving the man with the bayonet a fighting chance.

The literature which has appeared on the subject of the Great War throws very little light on the secrets which ultimately ensured success. It deals for the most part with the strategical aspects, whereas almost everything new that matters lies within the realm of tactics. It was not a question of where the attack should fall or when it should take place. It was the "mounting of the attack" which was at fault. The student of war must come down from the realms of strategy to the concrete tactical problem of ensuring the man in the ranks a fighting chance.

The practical experience of the Great War must not be forgotten. The tendency to formulate an entirely new doctrine on surmise as to future developments and peacetime manœuvres, instead of on the hard facts of war, must be resisted. Our training is reverting once again almost solely to the practice of movement. This must not be overdone. We must equip and arm for the battle and not for the ease with which the approach march can be effected. Commands and staffs must be primarily trained to handle fighting formations in the conditions under which decisive battles will be fought, namely, the conditions of deliberate attack.

THE EVOLUTION OF THE INFANTRYMAN'S WEAPONS.

By

LIEUTENANT R. G. THURBURN.

(The writer of this article acknowledges his particular indebtedness to Sir Hastings Anderson's "Development of the British Army," and to Atteridge's "Famous Land Fights").

No factor within the last hundred years has contributed so much to a revision of the tactical handling of troops in the field as the development of the soldier's weapons. No doubt the statement in Field Service Regulations that the battle can be completed only by means of the rifle and bayonet has held good for a longer period, but it has not before been true that the "weapons of the infantry..... enable it to develop rapidly in any direction a large volume of fire and movement, and to engage an enemy at a distance or hand to hand."

A study of the gradual development of the foot soldier's weapons is an aid towards an understanding of contemporary tactics, for the latter always have been, and of necessity must be, to a large degree influenced by armaments. We do not propose, however, to embrace in this review weapons other than those used by the British Army, and a convenient starting point is to be found in the Roman invasion of Britain in B. C. 55. To go back to the very beginning of weapons would be to trace the laborious development throughout the centuries of the club, the stone and the catapult, which were the forerunners of the axe, the mace, the spear, the sword, and the bow and arrow. This development, in a country of uncivilized tribesmen such as the early Britons, was necessarily slow.

When, therefore, Julius Caesar leapt ashore at Deal, he found his hosts confronted by men armed only with weapons of inferior workmanship. Accustomed to internecine warfare with other tribes dressed alike in skins, or to hunting wild animals with the rude weapons they possessed, the Britons had not hitherto been brought into contact with troops which for some centuries had been conducting a highly civilized warfare with the great nations of the period. Against the superior armament of the Roman Legions their poor weapons could not prevail.

The military influence of the Roman invasion was to be seen in the Anglo-Saxon forces of a later date. The infantry was classi-

fied as Heavy and Light, and was armed accordingly. The Heavy was equipped with spears, long broad swords and large shields from the centre of which a spike protruded. The Light had swords and spears only. In addition, however, there were bodies armed with javelins, axes and even clubs.

No noticeable improvement in the armoury occurred till after the Conquest (1066) when bows and arrows and half-pikes, lances, halberds, battle-axes, swords and daggers were carried by the Infantry. The Heavy battle-axe was a most formidable weapon, which could be swung with both arms, or hurled into the face of one's enemy. The Saxon Army had, as a matter of fact, used the long-handled Danish battle-axe, inherited from previous conquerors, with great effect at the Battle of Hastings. It is interesting to note that the pike survived as part of the equipment of Sergeants till 1829, being then known as a 'spontoon,' while it is still in use by our "Beefeaters," or Yeomen of the Guard, and also in the Papal Guards. With the increase in the killing power of infantry thus produced, it became the practice to wear armour. When armour came into use it was thought that the infantryman's value was decreasing. The knight and the mounted man-at-arms were the lords of the battlefield, and the infantryman was ill equipped to withstand them. But the battle fought by the Crusaders at Dorylaeum in 1097 produced a change which was eventually, though gradually, to restore to infantry its earlier position. It was realized that the ability to throw a missile, as opposed to hand-to-hand bludgeoning, had its uses. The weapon which now came into favour was the cross-bow. This was made up of a stock three to four feet long, with at one end a short and flexible steel bow fixed across it, at the other end a winch. The manner of its use is thus described: "The archer, holding down the bow end of his weapon by placing his foot on a projecting flange or in a metal bridle, bent the bow by winding up the winch, after hooking the cord coiled on its barrel to the bowstring. When the bow was bent it was secured in position by a catch and trigger. The 'bolt,' an arrow about eighteen inches long, was then placed in position, the archer brought his weapon to the shoulder, took aim, and loosed the bowstring by touching off the trigger."* It was possible also to shoot stones and leaden bullets as well as bolts. This weapon, which could kill a man or horse at

* A. H. Atteridge, "Famous Land Fights", page 73.

200 yards, piercing all but the heaviest armour, had considerable effect, being more powerful and accurate than any fire arm used for some centuries after the invention of gunpowder, though not as effective as the English longbow, which, however, was not introduced till some time later.

The cross-bow had given infantry an added importance, which was increased when the Swiss peasantry, in their battles with Austrian and French invaders, proved that spears and halberds could not only withstand a cavalry charge but could themselves be used for shock action. When to this advantage the English introduced the longbow in the early fourteenth century, infantry became once again the "Queen of the Battlefield." The long-bow had a bow six feet in length, which enabled the archer to use a long arrow, with a range of 300 yards, capable of piercing the armour in use at the time of its introduction. In going into action, an archer would stick his arrows into the ground before him and with training was capable of discharging twelve aimed arrows in a minute. The long-bow was thus a formidable weapon, and at the time of its innovation produced as great a change in tactics as the repeating rifle did some centuries later.

The immediate result of the long-bow's appearance was an increase in the weight of armour, and eventually it was worn to such an extent as to paralyse the ability to move easily, thus neutralising the fact that it was well nigh impossible for opponents to kill each other. There is a parallel in the situation then produced with that of to-day, when the prospect of mechanised forces moving in anti-everything vehicles against similarly equipped enemy is like to produce a situation similar to that of the Middle Ages. The latter produced the remedy in the shape of gunpowder.

Interesting though the origins of gunpowder are, we cannot dwell on them here. When first used in European armies it was as revolutionary in its application as was the introduction of gas in the late war. It is only natural, of course, that the original hand-gun was a heavy and clumsy weapon, which did not by any means at once displace the bow and arrow. One may with advantage compare the remarkable speed with which the modern tank has developed from its clumsy forbear, first used on the Somme, with the slow growth of the musket as a killing weapon. The bow and arrow were still in use, and with marked effect at Agincourt in 1415, and indeed formed part of the equipment of a proportion of men till the sixteenth century.

The last recorded appearance of the bow in European warfare was at Leipsig in 1813, when it was used against the French by some of the wilder Russian soldiery. The "Bow and Arrow General," in fact, took some killing. As late, even, as 1792, the Commanding Officer of the 44th Foot reported that he would prefer bows and arrows for accurate shooting, so bad was the infantry musket.

First used towards the end of the fourteenth century, the hand-gun was a weapon of more danger to the firer than to the enemy. It was not unlike a small cannon, consisting of a stock adapted from that of the crossbow, with a short, heavy barrel, fired with a match applied to its touch-hole. As may be imagined, the shooting was execrable, and the advice extended by a fifteenth century writer to the 'cannonier,' or artilleryman, applied equally to the soldier armed with the hand-gun:—That "in the first place he ought to honour, fear and love God, and to have Him always before his eyes, and go in fear of offending Him, more than other soldiers, for every time that he fires a bombard, cannon, or other piece of artillery, or is engaged in making gunpowder, the piece may be burst by its great force, or if it is not burst he is still in danger of being burned by the powder."

It may be wondered how the musketeer—obviously at first inferior to the archer both in speed of firing and in ability to kill—could supersede the user of the longbow. The reason is to be found in the moral effect produced by the use of explosives: early treatises on firearms acknowledge this fact by giving directions as to how the noise of the report may be increased.

Some considerable time elapsed before a marked improvement in the musket was made. The two essentials were that the rate of fire should be increased and that the weapon itself should be made more efficient. Towards the latter end, as more muskets were turned out, it was found possible to produce a better type of barrel, to add a stock whereon the barrel could be mounted—thus increasing the charges without additional recoil—and finally to add a priming pan and match-lock for firing the charge, which later developed into a flintlock and trigger.

To increase the rate of fire it was found necessary to devise a battle drill which is described as follows: "The musketeers were drawn up in successive lines, not shoulder to shoulder, but in the same open order that the archers used. The lines would be four,

five, or even as many as nine in number. The front rank on firing retired through the intervals to the rear of the array, the other lines meanwhile stepping forward. The second rank, as it reached the ground originally held by the first, halted, fired and fell back, and then the manœuvre was repeated by the third. While moving forward the men who had already fired would reload their muskets, the series of brief halts making it easier to perform the required movements. Nine ranks of thoroughly drilled men could thus keep up a steady and fairly rapid fire from their front, but the device meant a serious reduction of the volume of fire at any given moment.”*

For several centuries it was the custom to associate pikemen with musketeers in the firing line. The reason for this was to afford protection against cavalry to the musketeers, since the latter with their slow rate of fire were unable to beat off mounted men, and were unable effectually to protect themselves with the short swords with which they were also armed.

The ammunition carried consisted of some thirty leaden bullets, with a pound of black gunpowder in a horn, and about five feet of slow match, the end of which, smouldering, was attached to the hammer on the musket. By pressing the trigger the hammer was brought down on the open priming pan. It will easily be seen that damp of any description would render such firearms useless. The musketeers also carried a spiked aiming rest, having on top a U-shaped attachment, on which the musket was rested for firing.

It is an old complaint of the Officer of Foot that he has now-a-days to train men in the use of too many weapons to be able effectively to train them in the use of any one. Yet what would he have said had he been a subject of the Virgin Queen? In the days of Good Queen Bess we find that a company of approximately 200 men was armed in five different ways. Every man carried a sword and dagger, but in addition carried weapons as follows: Of the 200 men, 80 were “men-at-arms” who were composed of 20 halberdiers or battle-axe men, and 60 pikemen; and 120 were “shot,” who were composed of 40 archers, 40 musketeers, and 40 arquebusiers. Possibly it was easier to inculcate the intricacies of the arquebus into the contemporary military bonehead than those of the Lewis gun would have been, but it is an arguable premise that the intelligence of the nation has improved in the last four centuries.

* “Famous Land Fights”, page 103.

With the increasing efficacy of fire arms which the passing years produced, armour came to be discarded, but it is of interest to note that the gorget, which now-a-days is associated with the indifferently gilded staff, as a more effective throatpiece was the last relic of the armour-clad soldier which survived. Towards the end of the sixteenth century the infantry was divided roughly into two classes:—The musketeers, who were armed with matchlock muskets, swords and daggers; and the pikemen, armed with pikes varying in length from 14 to 18 feet, and swords.

To Gustavus Adolphus, the great Swedish King and general, we owe, amongst many military debts, the introduction of the cart-ridge. This was a distinct step forward, increasing as it did the speed with which the infantryman could fire his musket, and doing away with the complicated battle-drill which had hitherto been necessary to give time for reloading. Hitherto, the powder had been carried in a horn, which necessitated measuring each charge, or in small wooden bandoliers, each of which contained a charge.

The King also was responsible for the introduction of the wheel-lock as opposed to the match-lock musket. With the new weapon it was no longer necessary for the musketeer to carry a length of slow-match since by means of trigger and coiled spring a steel wheel was set in motion on a piece of flint, thus producing sparks and igniting the charges. By this means it became easier to fire a musket in wet weather. The musket generally, under the King's impetus, became a light weapon and the clumsy aiming rest was abolished.

In 1678, companies of 100 men were divided into 60 musketeers, 30 pikemen and 10 men armed with fusils. The latter were long muskets with a flintlock, which was itself an improvement on the wheel-lock. These fusils were also carried by officers. Several regiments were armed exclusively with the fusil, as opposed to the matchlock musket, and were specially trained for the protection of artillery, and, we find that in 1677, the "Foot Regiment commanded by the Earle of Marre"—now the Royal Scots Fusiliers—was ordered to form "a Grenadier Company to be instructed in all things belonging to the artillery, as gunnery, casting of grenadoes, and fyre works."

The grenade was a small explosive shell, lighted by a protruding fuse. Men selected as grenadiers had to be tall and long-armed, and were given a head-dress, surviving to this day in Guard and Fusilier

regiments, which would not interfere with their throwing ; the normal infantry headgear being at that time a broad-brimmed hat.

The invention of the bayonet, which first appeared about 1640, was beyond doubt one of the most important developments in the history of arms. Its introduction was responsible for a complete modification of tactics, for it was no longer necessary to have pikemen in battle to defend musketeers. The latter could now, not only defend themselves against cavalry charges but could also complete the fire fight by delivering a charge themselves. From this time infantry became the predominant arm in battle : from this time till 1927 infantry was " the arm which in the end wins battles."

The bayonet, of the triangular, locking-ring pattern, was introduced into the British Army about 1690. Previous to this, daggers had been so made as to fit into the muzzles of the muskets, which could not be fired while the daggers were affixed. This fact caused considerable consternation in the British ranks at the Battle of Steenkirk, when the French were seen to be firing with bayonets " on their pieces," what time the British were unable to reply, having their own muskets blocked with daggers.

The close of the seventeenth century saw the gradual displacement of pikemen by musketeers. Companies were now about 60 strong, of which 14 only were pikemen, the remainder being musketeers.

The eighteenth century produced no startling innovation in the matter of infantry weapons, but the nineteenth was to see a rapid development. In 1800, Sir John Moor formed an Experimental Rifle Corps at Shorncliffe, and the introduction of the rifle, although at the time confined to a few regiments, was to alter the whole course of tactics. The rifle had actually first come into use in the latter part of the eighteenth century, but it had been issued almost entirely to skirmishers. In its infancy the rifle was a slower weapon to fire than the musket, and it fired a ball and therefore did not possess the range and accuracy of later weapons. Even so, it was, generally speaking, a better weapon than the musket but expensive to produce.

It is of interest to note that about this time the French sharpshooters, who apparently relied more upon fear than fire to bring them their successes, frequently fired without ramming down their shot, as this rendered firing more rapid, and they expected greater results from the noise thus made than from the accuracy of their shoot-

ing. The Prussian soldier of the day was also apparently an indifferent shot, having been trained under the Frederickian system of order and correctness in time, so that, as long as the explosions of his firelock occurred like clock-work, little was expected of his accuracy of aim. Fire was opened generally at about 150 yards' range, even at 50 or 60 yards on occasion, and success was relied on as the result of rapid manipulation of musket, ramrod and cartridges. It was the Prussian General, the Prince of Anhalt-Dessau, who made the obvious invention of the iron ramrod, which was in use in Frederick's army for some years before other nations discarded its wooden predecessor, which was not only clumsy but liable to break and warp. Jackson (1750-1827), at one time Inspector General of Army Hospitals, has some interesting remarks to make upon contemporary weapon training.* The system of Frederick the Great, he affirms, was to "confound, astonish, and intimidate by noise," rather than to kill. He propounds elsewhere the theory—advanced for his day—that as the firelock was an instrument which should be carefully aimed in order to be of any use, firing by volleys should be discouraged and soldiers should receive thorough individual instruction, "for the justness of the aim is the main ultimate object of instruction." He proposed that after his first six months the recruit should be practised three days a week in musketry, being allowed seven ball cartridges each day. He stresses that "men should be taught to aim carefully instead of firing quickly"—a sound principle which it is still hard to inculcate into the minds of many soldiers.

The anti-climax in matters military which followed the conclusion of the Napoleonic wars provided little stimulant to further improvement in the soldiers' armoury. Towards the middle of the century, however, the percussion cap was introduced to supersede the old flint, which had served so long to fire off small arms. The innovation was strongly opposed, as usual, by the more conservative officers, who adopted much the same attitude as the artillery general, who had served under Wellington, maintained, when it was proposed to introduce rifled field artillery: "We won Waterloo without such things, and what do we want them for after that?"

With the Crimean War and its lessons there came a re-awakening of interest in military affairs. In this War the British and French

* "A Systematic View of the Formation, Discipline, and Economy of Armies", 1804.

infantry were chiefly armed with the rifle, the Russian with the musket. And though the rifle was used wrongly by its fire being withheld till it could be opened at close range, as in the days of the musket, yet its greater accuracy and killing power gained for it success against superior numbers on more than one occasion.

Ten years later the Prussians used an improved rifle which was to revolutionise tactics and organization. It was to the new breech-loader that they owed their amazing achievements in the campaign against Austria in 1866. Although the idea of a breech-loading rifle was not new, many factors, not the least of which was the lack of machinery to make manufacture cheap, had contributed to its non-appearance. Many soldiers, too, claimed that it would lead to needless waste of ammunition.

The Prussians had actually adopted in 1855 the famous "needle gun," so called because of the needle which was driven by the lock-action through the length of the paper-cartridge, on the base of which was fixed the cap. The effective range of this weapon was six hundred yards. Inferior as this rifle was, the Austrian muzzle-loading rifle was no match for it; the advantages of rapid fire in battle were proved to all European onlookers, and the immediate result of the Austro-Prussian War was that every nation adopted some form of breech-loader.

By 1870, the French had produced an improved type which could fire up to 800 yards, but owing to the fact that the paper-cartridge was still in use there were many defects. It is interesting to note that the French considered that, with the introduction of the rapid-firing rifle, the advantage in battle had passed from the attack to the defence, and that to achieve success it would only be necessary for troops to remain in one spot and mow down the attackers.

The first machine gun made its appearance in the French Army in 1870. Known as a 'Mitrailleuse' (mitraille-grape-shot) it was a clumsy collection of rifle barrels held together in a case. A breech block held cartridges equivalent to the number of barrels, the cartridges being fired simultaneously on depressing a lever.

It was not till after the Franco-Prussian War that the brass or copper cartridge-case appeared, but its arrival provided one great improvement, for the metal case, expanding under the shock of explosion, prevented the escape of gas into the breech action; an escape

which hitherto had done much to deteriorate the rifle. With this improvement appeared others, the most important being an increased range up to a thousand yards or more, as a result of which it came to be recognised that the old mass and shoulder-to-shoulder formations were no longer suitable for modern war. At this period more than at any other, infantry was regarded as the "Queen of the Battlefield."

It was not, however, till the last decade of the nineteenth century that the magazine rifle was produced. For many years inventors had been trying to find some practical means whereby a rifle could be automatically reloaded on a round being fired. Before the Franco-Prussian War, a rifle was produced with a second barrel containing cartridges below the firing barrel. As one bullet was fired, a spring forced another one up into its place. This rifle, however, was not practicable. In addition to its great weight, with each discharge its point of balance varied, thereby negating the possibility of good shooting. But about 1890, several kinds of magazine rifle capable of taking from five to ten rounds were produced, and in addition, methods were evolved of reloading the magazine in one action by means of a clip securing the cartridges. The bore, too, of the new rifles was made much smaller. The .450 Martini was replaced by the .303 Lee-Enfield. This change made considerable difference to the bullet, which met with a decreased air resistance and being, also, now propelled by a stronger explosive gained in velocity, range, and a flatter trajectory. The smaller ammunition also meant that the soldier could carry a greater quantity than before.

Machine guns at this time were being considerably improved, the Maxim gaining great favour, but the possibilities of this weapon were not realized till 1914.

In the years before the outbreak of war, rifles and ammunition in the British Army had been brought to a very high standard of excellence. Few weapons of foreign manufacture could compare with the Lee-Enfield. The War gave considerable impetus to inventors, and in 1915 the Lewis gun appeared, while grenades, gas, and trench mortars were being developed to an amazing extent. Of modern weapons one need not speak, but we must not imagine that the stage now reached is the final one. Even from this brief review of weapons we can see what extraordinary changes, what far-reaching develop-

ments have often been made in the space of a few years. At the present moment expense is the only obstacle to the issue of automatic rifles, and we have been told that the bayonet is in time to become a triangular-edged infant of eight inches. "Stream-line" bullets are being experimented with : a new gun to replace the Lewis has been promised us for some time ; changes in the revolver are to take place. Everything is in the experimental melting-pot. Who knows what changes in the armoury the next war will bring forth ?

MORE POLO NOTES.

By

“ GOTTI. ”

Is polo a game ? It used to be and entirely so. But these days things are different and it seems that polo to many is solely a means to an end. It appears to lots of people that polo in India is a mixture of :—

- (1) A parade.
- (2) A rich man's game or exercise.
- (3) Semi-professional “ pot-hunting.”
- (4) A method of army training.

Fortunately, however, there are still many people—players and non-players—who treat it as a real game, look upon station polo as the game proper, and consider tournaments in the light of station polo more highly organized to meet the need of “ weeks.”

The effect of the war and present conditions on polo in India have often been dealt with at great length, likewise all sorts of solutions to the problem have been advanced. The net result, however, still remains—despite the larger number of officers and officials in India now, compared with pre-war days, fewer play than ever before.

The following mere outlines of a much discussed and approved scheme—(perhaps suggested in print before)—are briefly given here, in order that it's possibility of success may be further discussed.

Expense is the main reason why fewer officers play now than ever before. Why ? The basic reason is one of supply and demand. It created the post-war standards of international and semi-international polo, just as it created pre-war tournament polo. One of the results was the doing away with the old height limit. Now all these three forms of high grade polo have come to stay, together with the no-height-limit. They have but naturally led to the adoption for polo of the expensive well bred polo horse. Consequently, the supply of ponies has almost died away and the demand for this type is nearly negligible. A polo pony proper is rarely seen playing these days and those who possess them, find that they are heavily outclassed by well bred polo horses. The main demand is for these alone and the pony has gone to the wall.

How is the demand for ponies to be created under present conditions? It is claimed that if ponies could be made of any polo value under present conditions, there would be a most tremendous polo revival. Expense, although the main reason, is not by any means the only one. Smaller ponies are far cheaper to buy and maintain, easier to train, easier to play, more popular with the fair sex, and good to pig! The pony market is not quite dead, it is not yet too late, the Arab, beloved of pre-war days, would come into his own again (likewise polo scurries), and station polo would again become the mainstay of the game.

It is thought that cheaper, easier and safer polo from ponies, would appeal to the following types of officers and others:—

- (1) Indifferent riders and those unable to afford the present high prices for polo horses or those unwilling to put all their financial eggs into such a fragile basket.
- (2) Those players who can only afford to have a couple of horses, would be greatly tempted to increase their number of chukkers by keeping—say, one horse and two ponies for the same outlay.
- (3) Those who play occasionally, or who have stopped playing, by reason of the jealousy and bitterness of modern polo conditions, would be more than tempted to play regularly or start again when polo became more of a real game than it is now.

How is this demand for ponies proper to be created? Why is a scheme of pony handicapping not possible—somewhat on the lines of racing? The charge of professionalism will not bear consideration. It is generally agreed that the *average* player owes roughly, 80 per cent of his polo value to his mount. A seemingly good player is often found to be quite hopeless when poorly mounted. Why wouldn't a scheme, something on the following rough idea, work?

Grade the tournaments, call these grades "divisions" if you like. Say 3 divisions. For example—

1st Division.—Big tournaments. All animals which have recently played, or are to play, in such tournaments, to be given an arbitrary handicap of, say 3; except those animals under the old height limit, whose handicap would be, say 2.

2nd Division.—Smaller tournaments. Animals handicapped as above with handicaps of 2 and 1 respectively.

3rd Division.—Station tournaments. Animals over the old height limit to possess an arbitrary handicap of 1, in addition to any other handicap held.

An animal would retain the handicap of the highest division he has played in, until re-handicapped on the lines players are now normally re-handicapped, for example:—

- (a) A 1st Division animal playing in a station tournament (3rd Division) would be handicapped as follows:—
 - 4. If over the old height limit.
 - 3. If under the old height limit.
- (b) A 2nd Division animal playing in a station tournament (3rd Division) would be handicapped as follows:—
 - 3. If over the old height limit.
 - 2. If under the old height limit.
- (c) A 3rd Division animal playing in a station tournament would be handicapped as follows:—
 - 1. If over the old height limit.
 - 0. If under this height limit.

The handicapping system for teams would remain as it is now with the exception that the handicaps of players and their animals would be added together.

It is claimed that were some such scheme adopted, the desired results would quickly follow. But surely there must be many good and sound objections to the idea or why has it not been adopted before ?

MILITARY NOTES.

BELGIUM.

NOTES ON MILITARY REVIEWS.

“ Bulletin Belge des Sciences Militaires.”

September, 1928.

Published by Impr. Typo. de l'Institut Cartographique Militaire,
Brussels. Price, 3-50 francs.

1. *Operations of the Belgian Army during the Campaign, 1914—18.*
(Continued.) *Operations of November, 1914, up to the fall of Dixmude.*

Day of 6th November.

In the Belgian Sector the offensive was to be resumed on the whole front under the same conditions as those of the preceding days. As regards the co-operation of the 32nd French Army Corps with the Belgian Army, the French main effort was no longer to be directed to the south of Dixmude, but to the south-west of the Forest of Houthulst, with a view to repelling the German troops, who attempted on 6th November to attack the front held by General de Mitry's Cavalry Corps.

The operation order of 6th November issued by Belgian G. H. Q. was drawn up on lines dictated by General Foch ; the latter's orders for a combined attack on 7th November (pages 197-198) reached Belgian G. H. Q. at 11 a.m. on 6th November.

Day of 7th November.

French troops.—Towards Lombartzijde the French troops under General Bidon made slight progress. In the Dixmude bridge-head a marked artillery duel took place.

Belgian troops.—On the Belgian front little progress was made beyond the relief of French troops in the neighbourhood of Rams-capelle and Pervyse.

Day of 8th November.

No action of importance took place.

Day of 9th November.

Beyond desultory bombardments, especially against the Dixmude bridge-head, there was little to report.

Day of 10th November.

On this day, the 4th German Army made an energetic offensive against the Franco-Belgian front between Dixmude and the sea, with a view to assisting the offensive of the Linsingen group of armies against the Ypres salient; the front between Dixmude and the sea did not lend itself to operations on a big scale, owing to the inundations which had been carried out. The attack by the 4th German Army met, however, with considerable success and resulted in the fall of Dixmude on 10th November. The fighting leading to the fall of the Dixmude bridge-head and the results achieved are described on pages 204-208.

2. *The rôle of the Field Army and of the Belgian Fortresses in 1914.* (Continued.) By Lieut.-Colonel Duvivier and Major Herbiet. Of interest.

Part VII.—Second sortie from Antwerp. (9th to 13th September.)

The march of the German 9th Reserve Corps towards Ghent on 7th September, ending in the fight at Melle, constituted a new menace to the Belgian line of communications with the left bank of the Scheldt.

On 9th September, with a view to relieving this danger, the Belgian Army attacked and captured Aerschot and occupied the country south of the Demer the same afternoon.

The same day information of the withdrawal of the German 9th Corps to France was received. In consequence the King of the Belgians decided to profit by the enemy's temporary reduction in strength and to attack his weakened positions.

The attack was planned for 11th September, on which day the Belgian Cavalry Division bombarded Tirlemont Station and blew up the aqueduct at Boutersem. The Belgian offensive failed, however, and on 13th September the Belgian Army withdrew to within the outer line of the Antwerp forts.

The blowing up of the aqueduct having rendered the Tirlemont—Brussels railway line unserviceable, all German transports had to be diverted to the Meuse railway line, *i. e.*, via Liège—Namur—Charleroi and on to Mons.

The remainder of this article deals with—

- (i) The repercussion of Belgian strategy on the battle of the Aisne.
 - (ii) The influence of the resistance at Antwerp on the events which took place in Flanders in October, 1914.
3. *The Offensive. The engagement and progression towards contact with the enemy.* By Colonel Hans.

The article discusses the rôle of advanced guards in war.

- (a) The writer deals first with the action of an advanced guard to an army, opposed to an enemy who has taken up a defensive attitude.

The author considers the following problems:—

- (i) The choice of the main points for attack by the advancing troops.
 - (ii) The rôle which the latter should play during the engagement, and their task of keeping contact with the enemy.
- (b) In the second portion of the article the same problem *vis à vis* an enemy who is taking the offensive is discussed, and the following questions are considered:—
- (i) Forward movements preceding the attack, *i. e.*, night operations.
 - (ii) The study of the ground.
 - (iii) The work of the general staff.
 - (iv) The instruction to be gained in tactical movements of this nature by means of large scale manoeuvres in peace.
4. *The History of Engineering.* By Lieut.-Colonel Coppens.
Part II. Of historical interest.

The author continues this narrative from the August number.

He starts with the XVIth Century, when under the *régime* of the Medicis, fortifications giving protection against gun fire were first created in Italy. He then traces progress in fortification during the wars under Phillip II and his successors in the Netherlands from 1556 to 1625, during which period the famous Dutch fortification school under Maurice of Nassau was formed, whose work began with the construction of Breda Fortress in 1553.

The writer next deals with the early history of mining and counter-mining during the reign of Louis XIV (pages 257-258) and then passes to the history of Vauban, the great French engineer, during the same reign.

5. *The transportation of Belgian Tanks.* By Lieutenant de Grave. Of interest.

In this article the writer traces the various experiments which have taken place in the French Army with regard to the transport of tanks, i. e., either carried on lorries or travelling under their own power.

With regard to tanks employed in the Belgian Army, a decision has not yet been reached whether tanks will eventually be carried on lorries or by tractors fitted with trailers.

Preference is for the moment given to a tractor with a trailer capable of carrying a load of 7 tons, whilst in the French Army a lorry is employed for carrying the tank.

In Belgium the War Department authorised in 1922 the purchase of two tractors and two trailers for transporting their light Renault tanks. The characteristics of both tractor and trailer are given on pages 274-275.

Trials were successfully made over a distance of 250 kilometres over hilly country.

Four more tractors with trailers have since been ordered. Illustrations are given on pages 267-277.

The writer ends the Chapter (pages 278-279) by describing the experiences of the French Army in Morocco in 1925, which show that the French Army prefer the system of carrying tanks on lorries.

6. *How to construct models representing various natures of the country.*

The writer gives a short account of a rather ingenious method of making models in plaster of the main features of a portion of country, for the instruction of officers and non-commissioned officers.

October, 1928.

1. *Operations of the Belgian Army during the Campaign, 1914-18.*
(Continued.)

Before beginning the study of the operations of the Belgian Army during the period of stabilized warfare, the author considers that it would be of interest to trace the various fluctuations in organisation through which the army passed during the war, and at the same time to give an appreciation of the organisation of the lines of communication and bases during the period in which the latter were established in France.

In this number the organisation of the Belgian Army during the war is dealt with alone, and interesting statistics are given under the following headings:—

(a) *Recruiting*.—Showing how from 1915 onwards classes available after the placing of the Belgian Army on a war footing in August, 1914, were called up. Owing to the calling-up of these classes the effectives of the Belgian Army rose from 70,000 in 1914 to 162,000 in July, 1917, and to the maximum of 164,000 in April, 1918 (pages 290-293.)

(b) *Instruction of officers and men*.—Describes the creation of "Centres of instruction" for auxiliary 2nd-lieutenants and for staff officers (page 293), also for the instruction of recruits and specialists (page 294).

(c) *The growth of war material* (pages 295-304).—The author traces the gradual improvement in the acquisition of war material in the Belgian Army, where in 1914 the situation left everything still to be acquired to the period before the Armistice when the Belgian Army was in a position to deal with the exigencies of a modern war.

Under this portion of the work the author deals with the following:—

- (1) The armament of the infantry company.
- (2) Machine guns.
- (3) Artillery (field, heavy), trench mortars and anti-aircraft.

This chapter is undoubtedly of great value to those interested in the study of the difficulties confronting Belgium during the war.

2. *The rôle of the Field Army and of the Belgian Fortresses in 1914*. By Lieut.-Colonel Duvivier and Major Herbiet.
Of interest.

This article ends the narrative of the rôle of the Belgian fortresses in the Great War. The writer comments on the fact that the lack of collective training in the Belgian Army before the outbreak of the war was the chief cause of the lack of cohesion in the Belgian Field Army.

The lessons for the future which are apparently to be deduced by the Belgian Army of to-day, from their experiences in the war, are as follows:—

- (a) The necessity for the constitution of a good covering force in addition to an adequate field army.

- (b) The extensive and exposed Belgian eastern frontier constitutes a very great menace at the outbreak of war, especially now that her fortresses have been destroyed. The French barrier, it is noted, through the Treaty of Versailles, has been considerably reinforced.
- (c) Belgium must be sheltered from invasion in a war of the future. 1914 proves the utmost necessity of providing as a second line of resistance, fortified areas, on which a retirement could be made should the necessity arise.
- (d) If the feeble Belgian forces at the disposal of the country in 1914 enabled her to defend her country step by step from Liège to the Yser during 3 whole months, and obliged Germany to divide her forces to the detriment of her plans for an united assault on her allies as a whole, this was due to the rôle played by the Belgian fortresses.

This chapter closes with annexes showing the strengths of the German forces detained in Belgium owing to the various actions in which the Belgian Army was employed and also the actions in which the various German formations took part.

3. *Tanks.* By Major Liébin. (Concluded.) Of interest.

Part VII of this work concludes the subject of Tanks, as dealt with by the author in this year's "Bulletin Belge."

Tanks of the following countries are dealt with:—Belgium, Brazil, Finland, Roumania, Greece, Yougo-Slavia.

This group of countries utilise Renault F. T. tanks, details of which have appeared in previous number of the "Bulletin Belge."

In Belgium the possibility of improving communication between the tank commander and the driver by means of a tankophone is being studied.

Other countries dealt with in this chapter are:—America, Spain, Japan, Russia, Poland, Tcheco-Slovaquie, Sweden, Germany.

Under America the author deals with the characteristics of the following tanks:—

The Ford tank.

Medium tanks, models 1921-22.

The Christie tank.

Light tanks: the T. I.

The whole article is profusely illustrated and should be of interest to the Royal Tank Corps.

In conclusion the author states that the whole question of tanks is still in the process of evolution, but that at the present moment certain tanks can make their action felt at a distance of 60 miles from their bases.

It is no exaggeration to say that the 1928 tanks are to the tanks of ten years ago what the motor car of to-day is to the motor car of 1900.

4. *The History of Engineering.* By Lieut.-Colonel Coppens.
(Continued.) Of interest to the Royal Engineers.

The author opens his chapter by tracing the growing jealousy existing about the period 1703 between the artillery and the engineers during the epoch of Louvois and Vauban.

The most active partisan at this period for the authority of the artillery over the engineers in matters of fortification was Vallière, who made his name as a sapper and miner, and in 1718 became Director-General of Artillery.

In 1755 the complete absorption of the engineers branch by the artillery took place and the son of the old Vallière became Director-General of the Corps of Artillery and Engineers.

The first part of this chapter deals with this artillery-engineer controversy in France up to the reign of Louis XVI, and from a historical point of view is certainly of interest.

The second part deals with the period of the Revolution, the Empire and the Restoration, and refers to the development of the engineer arm, especially under Napoleon.

5. *Encounter Combat between the 3rd French Colonial Division and the 6th German Army Corps near Rossignol, St. Vincent and Tintigny on the 22nd August 1914.* From a report of Captain Allemann. Of interest.

Captain Allemann, who has already published a study on the fight of Neuchateau in the Belgian Province of Luxembourg, continues the story of the 22nd August, 1914, by an account of the fighting at Rossignol, St. Vincent and Tintigny, all in Luxembourg Province.

The forces engaged were the French 3rd Colonial Division (General Raffanel) forming part of the Colonial Corps (General Lefèvre), opposed by 6th German Corps (General Von Pritzelwitz) forming part of the 4th German Army.

The separate actions at Rossignol, St. Vincent and Tintigny are described in detail and illustrated by maps. The fighting at all these places was very severe and the losses very heavy.

This work of Captain Allemann deals with a phase of the fighting in Belgium about which very little has been written and is therefore of interest to military students.

6. *The Organization of the Swiss Army.* Of interest.

A very well drawn up and interesting account of the organization of the Swiss Army, giving a full account of the army organization under the various arms, the system of recruiting, peace and war establishments, and the military Budget for 1927.

EGYPT.

Political situation.

On 2nd September the Egyptian Government announced its adherence to the Peace Pact without acknowledging any connected reservations made by other Powers. Meanwhile, the Prime Minister appears to be slowly but surely consolidating his position against the Wafd. Following on the suppression of two Wafd newspapers, Mohamed Mahmud paid a highly successful visit to the stronghold of the opposition party at Tanta. While speaking at that town he was at pains to announce that the policy of his government was to secure Egyptian independence by constitutional methods, and to complete internal reforms designed to promote the general welfare of the country. This frank exposition of his case has undoubtedly appreciated the Prime Minister's stock, while that of the Wafd has been reduced as the result of a series of discreditable charges which have recently been made against various members of the Wafd who are no longer able to take refuge under parliamentary immunity.

On 22nd September Sarwat Pasha, who had twice been Prime Minister of Egypt, died suddenly at his house in Paris. While Sarwat has never commanded the overwhelming popularity of Zaghloul Pasha, he has strong claims to go down to history as one of Egypt's greatest contemporary statesmen. His death at the present juncture is particularly to be deplored since the present Government undoubtedly derived encouragement from his moral support.

ESTONIA.

A Field Firing Exercise.

During an exercise attended by the War Minister that was carried out recently by troops of the 2nd Division, live ammunition and electrically controlled mines were used with the object of accustoming young soldiers to the conditions of battle.

This exercise, over undulating country dotted with small trees and low scrub, took the form of an attack by two infantry regiments (a total of six battalions), supported by the machinegun squadron of a cavalry regiment and two batteries of field artillery. The enemy was represented by a few men, occupying shallow dug-outs, in a defensive position along a line of small hills.

During the attack on the first objective the infantry were held up for a short time by enemy covering troops but, after an artillery bombardment and the receipt of reinforcements, eventually captured the objective.

After a pause of 45 minutes, during which artillery and reserves moved rapidly forward, the attack on the second objective was launched, the main attacks being made on either flank where the enemy resistance was weak. During this phase, however, owing to the mis-timing of the attack of one battalion by ten minutes, the War Minister gave orders for the troops to be withdrawn and the attack repeated.

Throughout the exercise the artillery support was given in a series of concentrations, which were lifted somewhat earlier than would be the case in war. This was apparently the only safety precaution that was observed, although live ammunition was used. The artillery fire of the enemy was represented—and that of the attack supplemented—by buried mines which were exploded electrically. Directions to this end were sent by telephone as occasion demanded, from the chief umpire centre to the enemy parties in their dug-outs and to men previously concealed on the line of advance. In this way the penalty for unnecessary exposure or undue haste on the part of the attacking troops could be aptly applied, and faults of this nature at once corrected. The actual composition of the mines has not been reported, but the craters were sometimes as large as those made by 4.5 inch shells.

Apart from the normal use of regimental umpires for reporting and controlling the situation, the use of live small-arm ammunition

by infantry and machine guns, whose fire was directed just as the tactical situation demanded, gave a certain reality to the exercise. Mistakes such as directing fire on an area occupied by one's own troops, and errors in elevation of covering fire would have been immediately apparent.

Throughout the exercise which lasted seven hours, the fitness of the men, carrying heavy packs and "humping" automatics at the double for long distances, was very praiseworthy.

It seems that only one man was wounded.

France.

New Infantry Manual.

1. Part 1 of the new Infantry Manual (*Règlement de l'Infanterie*) has recently appeared.

2. The manual is being divided into three parts—

Part I.—Infantry drill and battle formations.

„ II.—Infantry in battle (*combat*).

„ III.—Infantry in the field (*service en campagne*).

Only Part I is published at present.

3. The preface may be summarized as follows:—

(i) The French realize that they cannot train, under the new scheme of only one year's service, junior non-commissioned officers to lead the rifle and L. A. teams (*équipes*) which used to form two separate parts of their sections (*groupes de combat*). They also realize that a large majority of their section leaders (*chefs de groupe*) will, on mobilization, be reservists and undoubtedly rusty. They have, therefore, further simplified their battle formations and made the *groupe de combat* practically a single unit under the immediate control of its *chef*.

(ii) In their new light automatic the French realise they have a really sound, reliable and accurate weapon, and that therefore the fire power of the infantry company has been trebled. As a natural corollary the machine gun company can now be used in its proper rôle of giving covering fire from a distance. It will be remembered that the old light automatic was so unreliable that it was the normal practice to attach a section of machine guns to the infantry company and these heavy weapons had to try and keep pace with the infantry advance.

At war strength *the groupe* consists of—

- | | | |
|---------------------------|----|---------|
| 1 <i>chef de groupe</i> . | | |
| 1 corporal. | | |
| 1 firer .. | .. | } L. A. |
| 1 loader .. | .. | |
| 3 ammunition carriers | .. | |
| 4 riflemen. | | |
| 1 rifle bomber. | | |

The French platoon virtually now consists of three L. A. sections with very small bayonet power and the duty of these *fire* units is to support each others advance to within 400-200 yards of the enemy's position.

4. Part I is divided into nine main headings :—

- (i) Preliminary data, *e. g.*, composition of the regiment and each of its units, definitions.
- (ii) Organization of instruction.
- (iii) Education in morale.
- (iv) Individual training.
- (v) Training of the *groupe*.
- (vi) Training of the *section* (platoon).
- (vii) Training of the company.
- (viii) The battalion and the regiment.
- (ix) Practical methods of instruction applicable to small units.

5. The following is a translation of the preface of this new manual, to which has been added a comparative table showing the fire power of an English brigade and a French regiment :—

Reglement de l'Infanterie.

Ire Partie.

Instruction Technique 1928.

Translation.

Preface.

Immediately after the end of the war, the urgent need of providing the infantry with the necessary manuals for training purposes led the directorate of this arm at the Ministry of War to draw up as rapidly as possible and issue the Provisional Manual for Infantry Training, dated 1st February, 1920.

Based directly on the lessons of the Great War, this manual carefully codified the principles and minor tactics which led to victory and which still hold good.

Eight annual contingents, the majority of our professional non-commissioned officers, together with a large number of our regular and reserve subaltern officers have been trained in accordance with the principles laid down in this manual.

Had not three important events, of a nature to necessitate a careful revision of post war work intervened, the same manual could have been used for the training of future contingents and cadres.

These events are—

- (1) The issue of the Provisional Instructions on the Tactical Employment of Higher Formations (*Grandes Unités*).
- (2) *The Reorganization of the army*, comprising the adoption in the near future of one year's colour service, a considerable reduction in the number of the units of the *Armée Active* and a corresponding increase of units formed on mobilization.
- (3) *The increase in the fire power of infantry*, due especially to the adoption of the new light automatic, which has properties comparable to those of the machine gun up to a range of 1,200 metres.

Further, it was natural that advantage should be taken of this revision, imposed by circumstances, to introduce amendments or to clear up certain points which, in themselves, would not have justified redrafting the Regulations. These in practice were found to need complete or partial amendment; the most striking one being the reorganization which has been laid down within the platoon.

* * * * *

In the absence of a Manual common to all arms, the editors of the 1920 Infantry Manual were forced to introduce a certain number of principles or considerations on general tactics, which were necessary to place the action of the infantry in its proper perspective.

This became redundant after the issue of *Grandes Unités* and its eight appendices, the instructions in which will henceforward be authoritative. It became essential, therefore, first to eliminate those parts of the text from the Infantry Regulations which were duplicating the above regulations; secondly, to bring the various manuals into line.

This is what has been done, more especially in the phraseology of the parts dealing with defence.

At the same time, a decision was arrived at, after 1920, to arrange the regulations of each arm in a similar manner, in three parts :—

Part I.—Technical training.

„ II.—Battle.

„ III.—Service in the field.

Part III has absorbed the appendices to the 1920 Manual which treated of the same subject. It has been based on the same plan as the corresponding appendix to *Grandes Unités* and forms a complete guide to the life of an infantryman in the field.

Pending the revision, after the most exhaustive examination, of certain parts of this appendix, it introduces a more modern conception of protection on the move and at rest when not in contact with the enemy. For protective dispositions strung out in depth or split up in a series of echelons of increasing strength, which were very difficult to define concisely as having a distinct rôle, a simple method of distribution has been substituted, always deployed and always divided into two echelons—the echelon of reconnaissance or observation and the fighting echelon or echelon of resistance, the name of each echelon defining its rôle.

* * * * *

The new laws on the organization of the army envisage the transition, in the immediate future, to 1 year's colour service and, as a result, on mobilization an ever increasing proportion of men and cadres from the reserve in the active units and in those to be formed on mobilization.

The natural result is the necessity for still further simplifying everything which can be simplified, for cutting down training programmes to bare essentials, and for creating more rapid means of training the non-commissioned officers of the annual contingent and the future professional non-commissioned officers.

Also, instead of insisting on all infantrymen being first good riflemen, the necessity has arisen for deciding, as soon as the conscripts arrive in barracks, on the selection of the personnel for the machine guns and close support weapons, and for the personnel for observation and intercommunication duties to be trained as soon as possible.

The need of drawing up regulations which will be within the capacity of the reserve non-commissioned officer and officer, and which contain all the tactical information indispensable to them, has led to the adoption of different methods of presenting the instruction regarding the conduct of fighting for the different units.

For the *groupe*, the *section* (platoon) and even the *company*, it becomes increasingly important to lay down a limited number of essential formations, and to explain the cases of their employment by giving rules and not tactical considerations which might be interpreted differently.

The opinion that there was no need to describe for the *groupe* its normal fighting formations or to lay down set forms has not proved sound, in view of the fact that the majority of the *groupes* will be commanded on mobilization, by sergeants of the reserve.

For the *battalion* and the *regiment*, on the contrary, the conduct of battle demands a more complete knowledge of the tactics of the arm. Moreover, have the instructions on minor tactics laid down in the Regulations of 1920 been adhered to? Besides it will be far more useful to junior officers, who will have to carry out the instructions, if they understand the reasons underlying them.

This statement involves, it is true, a certain enlargement of the Manual; it is inevitable since infantry has become a technical arm owing to the complexity and variety of its material. Simplicity has been sought in the expression of ideas and in the suppression of the less useful formations. It behoves the officer instructors to complete this effort of simplification by indicating to the cadres those parts of the text which they should comprehend thoroughly, and those which are merely useful as information.

* * * * *

Owing to the adoption of the *fusil mitrailleur* 1924, the infantry possesses a weapon whose rapidity of fire and reliability of mechanism guarantees efficiency at short and medium ranges. Advantage should be taken of this circumstance to exploit the properties of machine guns to the full by extending their limits of employment. On the other hand, the offensive power of infantry fire has become still further increased from the fact that the number of close support mortars has been doubled, and a marked improvement has been made in the accuracy of these weapons.

Such important changes should be realized and translated in the regulations by strengthening the theory that fire is the vital factor in a fight and that the tactics of small infantry units are, above all, the art of distributing these units with a view to producing the required fire. It is not so much a question of arriving by more or less subtle movements, at pushing fractions forward against certain parts of the front or flank of the enemy, as of concentrating a sufficient number of projectiles on well-selected points or areas.

To-day the *fusil mitrailleur* 1924, the long-range machine gun and close-support mortars, give the infantry the means of effecting fire of such power that, when the methods of *observation, intercommunication and supply*, now being improved, have advanced on a par with armament, it will be possible, in the attack, to extend beyond the fronts indicated in the 1920 Regulations as normal.

Meanwhile, training in the use of existing weapons assumes, in the smaller units, an increasing importance, for perfect results can only be obtained by making the most of every one of them.

In defence, where supplies are comparatively easy, the large allotment of powerful and accurate weapons to the infantry greatly increases its power of resistance and enables it to hold out for a long time with its own resources and on somewhat extended fronts against even strongly supported attacks.

Finally, the respective *rôles* of the light automatic and the machine gun become easier to define, now that it is no longer necessary to think about the possible substitution of the latter for the failings of the light automatic. Except in cases justified by special conditions of ground or by the opportunity of using the whole of the beaten zone, more particularly when fire can be brought to bear from a flank, the machine-gun sections, while remaining under the orders of their captain, will be allotted tasks by their battalion commander which are distinct from those of the light automatics. As regards this point the drawing up of a fire plan (*base de feu*) in an offensive (the idea of which was first put forward in the 1920 Regulations), is now laid down as the normal procedure when considering a battalion's plan of action.

* * * * *

The principal points of the 1920 Regulations in which amendments have been introduced are the following :—

The *exercices d'assouplissement* have been described as *exercices préparatoires au combat*. They form part of the technical training of units.

The instructions concerning the maintenance of contact have been rendered less hard and fast ; they appeared to lead to restricting the freedom of decision of the commander.

The possibility of carrying out an immediate counter-attack has been limited to the section (platoon) and company. Counter-attack is carried out by fire ; this necessarily involves preparation and delay in execution.

It is laid down that the *rôle* of the reserves in the exploitation of a first success consists less of following the first echelon through a breach it has succeeded in making than of enlarging this breach by a fire attack on the two salients which it creates.

A notable modification has been introduced with regard to the fighting methods of the *groupe* and the *section* (platoon).

It was necessary to counteract—

The apparent effacement of the *rôle* of the section leader (platoon commander), the Regulations, which had been the first to codify the *rôle* of the *groupe* having over-emphasized the importance of the latter, to the detriment of the *section* (platoon).

An erroneous interpretation of the possibilities of movement of the *groupe* based on splitting it into two *équipes*.

The abuse which persisted of lines of riflemen being too often preferred, without adequate reason, to a much less visible formation and one that is the easiest to lead, *viz.*, the column.

By eliminating one corporal in each *groupe*, it has been possible, without altering the total strength, to provide the *section* (platoon) commander with an assistant non-commissioned officer, an observer and a corporal ; the latter capable, if necessary, of taking command of the three rifle bombers of the *section* (platoon).

This measure was completed by the suppression of the *équipes* : the *groupe* is never split up, except for the purpose of decreasing its visibility and vulnerability.

The *chef de groupe* is in direct command of the *groupe* as a whole ; his rôle—now much simplified—is never to manœuvre, but merely to make his *groupe* as a whole advance to its objective.* The light automatic is kept in constant readiness to develop its maximum fire power ; the riflemen acting first, possibly, as scouts ; then, when sufficiently close to the enemy, provide it, if necessary, with the support of their own fire ; and finally, when within assaulting distance the *groupe* comes to grips with the enemy, each man with his own weapon.

The *section* (platoon) is the smallest unit capable of effecting an independent manœuvre ; under the orders of its commander, the three *groupes* can—by advancing alternately—ensure the continuity of movement, as well as of fire.

There is, however, no comparison between the very simple combinations of this method of action and the tactical movements involved when larger units are engaged in a general action, normally on extensive fronts and with artillery support, sometimes also with the assistance of tanks.

* * * * *

No essential amendments have been introduced in the instructions of the 1920 Manual as regards the employment of the company and larger units.

What is essential above all is, that the directors of the training exercises of these units should be imbued with the vital importance of *Fire* and that they do not look upon movement as an end in itself.

Before the delivery of the final assault, the manœuvring of a small infantry unit should have but the single aim of bringing to bear a fire power superior to that of the enemy.

In the mind of the commander, the defining of areas to be swept by fire should always precede the choice of fire positions, or of movements to be carried out. No distribution of troops is of any value unless it allows of fire power being developed to its maximum. In fact for infantry, almost all fighting problems are summed up in the problems of fire.

* N.B.—Under the 1920 Manual the two *équipes* (rifle and L. A. teams) of the *groupe* could be and were encouraged to manœuvre as separate units. The French now find they have not the time to train leaders for these *équipes* and the *chef de groupe* is to keep a tight hand on the two *demi-groupes* as they are, now styled.

It follows that—for *small infantry units*—the knowledge and employment of their weapons form the essential aim of training.

The confidence of the infantry in their own strength is proportionate to their skill in making use of weapons which they know to be effective.

The military value of troops depends upon this skill and the confidence which it inspires

. . . Although war assumes new forms in accordance with the development of the art of destruction, yet it remains in principle a struggle of wills and morale.

The Manual of 1920 succeeded in emphasizing as clearly as possible the capital importance of this factor. . . .

Comparative table of fire power.

British brigade.										French regiment.					
	L. A.	Rifles.	Discharger cups.	Revolvers.	Machine guns.	Anti-tank guns.		L. A's.	Rifles.	Rifles V. B. with dischargers.	Revolvers.	Machine guns.	Stokes mortars.	.37-mm. guns.	
Section—															
Rifle	..	8	4	..	..	..	<i>Groupe de Combat</i>	..	1	9	1	2	..	..
L. A.	..	6	..	2	..	..	<i>Section</i>	..	3	30	4	6	..	..
Platoon	..	30	8	5	..	..	<i>Compagnie de fusiliers</i>	..	12	140	16	27	..	..
Rifle company	..	129	32	22	..	..	<i>Voligeurs.</i>						..	..
Machine gun company	..	125	46	..	16	..	<i>Compagnie de mitrailleuses</i>	..	..	121	..	38	16	..
Battalion	..	537	96	125	16	4	<i>Bataillon</i>	..	36	541	48	119	16	..	
Brigade	..	2,148	384	500	64	16.	<i>Regiment</i>	..	108	1,623	144	357	48	6	
														3	

Note.—1. Rifles and carbines in French regiment are grouped together.

2. Headquarters personnel are not included in above figures as under :—

British Brigade—Battalion Headquarters Wing, Nos. 1 and 3 Groups (less A. A. Lewis guns) : Total, 8 revolvers, 170 rifles.
 French Brigade—Battalion Nos. 1, 2 and 3 groups consisting of signallers, intelligence, supply and sanitary personnel. Regimental staff, Section de Commandement : clerks, cyclists, signallers, intelligence personnel, liaison non-commissioned officers; Peloton de Cavaliers (escort), Compagnie Hors Rang : cooks, drivers, sappers, storekeepers, clerks, farriers, sanitary and veterinary personnel, butchers, &c.; Compagnie d'Engin's d'Accompagnement.

Creation of a separate Air Ministry.

On the 2nd September, M. Bokanowski, the late Minister for Commerce and Air, whilst in the act of rising from the aerodrome at Toul to go and open the Auvergne flying festival at Clermont Ferrand, crashed and was killed. This occurred after the celebrations on 1st September of the second anniversary of M. Poincaré's present administration, held at the latter's country house at Sampigny.

For some time the question of the appointment of a separate Air Ministry to give an impetus to civil aviation had been under consideration by the Cabinet and was widely advocated by the Press. The tragic death of M. Bokanowski finally brought matters to a head, and at a meeting of the *Conseil des Ministres* on 14th September, M. Laurent Eynac was nominated to the post.

The new minister at once drew up a plan of organization. This was put before the *Conseil* on 20th September, the main proposal being that the new ministry should be organized on lines very similar to our own, with control over naval, military and civilian air personnel and matériel. M. Painlevé and M. Leygues, the Ministers for War and the Navy respectively, raised the strongest objections to the proposed plan and M. Poincaré was unable to obtain any form of compromise. The result was the postponement of further discussion until the next meeting of ministers on 26th September.

In the intervening days M. Laurent Eynac visited the Ministers of War and Navy but without success. The Press devoted much space to the matter and generally favoured M. Eynac's proposals.

On 26th September the *Conseil des Ministres* decided as follows :—

- (1) The new Air Ministry will be responsible for the preparation of the yearly budget, after consultation with the Ministries for War, Navy and Colonies.
- (2) All orders for material and all contracts will be made by the Air Minister.
- (3) All air personnel, naval, military and civil, will come under the authority of the new ministry, which, however, will place permanently at the disposal of the other ministries the units and formations required by them.

The above decisions are largely due to the support given to the Air Minister by MM. Poincaré, Tardieu and Sarraut.

M. Laurent Eynac will have as his *Chef de Cabinet* M. Louis Couhe, a former deputy for the Pas de Calais. M. Couhe was himself a war pilot and continues to train regularly as a reservist. He is president of two aeronautical associations in France.

M. Eynac's principal adviser will be General de Goys, who has previously worked under him. General de Goys has considerable experience in air matters and is very popular in the French Military Air Service.

Administration of the Transport Services.

Train des Equipages.

The French Transport Service has since the war been under the *Direction de l'Artillerie*.

During the discussion on the reorganization of the French Army the argument was advanced that owing to the increasing importance of motor transport in modern armies, the transport service should be divorced from the artillery, and constituted as a separate arm of the service. This proposal was not accepted, on the grounds of expense.

A decree of 9th August transfers the administration of the Transport Service to the *Direction de la Cavalerie*.

At first sight this appears a retrograde step, in view of the large amount of motor transport now allotted to the artillery, and the small progress made so far by the French cavalry as regards mechanization.

The new organization is, however, probably intended to assist in the modernization of the French cavalry.

It is understood that the new head of the *Direction de la Cavalerie*, General Dugué MacCarthy, is anxious for progress in mechanization. The *rapports* on the Law for the reorganization of the Army described French cavalry organization as being in a state of flux. The laws provide for dismounted cavalry units carried in motor transport vehicles as an integral part of the future cavalry division. These units are to be known as *Dragons portés*. The French are carrying out various experiments at present in the use of motor transport with cavalry formations.

Mountain Warfare School.

The *Ecole de Montagne* is to be transferred from Grenoble to Annecy on 1st October. This school was formed some 3 or 4 years ago and a visit to the school forms part of the course for senior officers at the *Centre des Hautes Etudes Militaires*.

No foreign officers are permitted to visit this school, presumably because it carries out schemes which deal with the actual defence of the south-east frontier against Italy.

Administration of the Transport Services.

A decree dealing with the administration of the transport services was promulgated on 3rd October, 1928. As soon as credits can be voted for the purpose, a separate directorate of the train will be created.

(a) 23 mobilization centres are to be formed for this arm : one per region, one for Paris and four for Algeria and Tunisia.

(b) The decree of the 3rd October fixed the number, nature and composition of the train troops in accordance with Articles 16 of the Law of Cadres and Effectives. These consist of:—

One mixed squadron (H.T. and M.T.) of 6 companies (Paris).

One H.T. squadron of 5 companies (Army of the Rhine).

One M.T. squadron of 8 companies (Army of the Rhine).

Two M.T. squadrons. General Reserve of 2 companies each (to be formed).

19 independent companies (H.T. and M.T.) at headquarters of regions.

One independent mixed company at Saumur (Cavalry School).

Four mixed squadrons of 2 companies each (North Africa).

Two H.T. squadrons of 4 companies (Morocco).

One M.T. squadron of 5 companies (Morocco).

One mixed squadron of 4 companies (Levant).

The last four units will have native personnel.

(c) The total effectives estimated for are as follows:—

387 officers.

12,000 sous-officers and soldiers, of whom 5,430 are French,

2,665 being re-engaged men and the remainder native.

The command of train troops is so arranged as to make them autonomous as regards the formations to which they are attached : for instance, the train troops of the Armies of the Rhine, Levant and Morocco are directly under the G. O. C. in each case ; equally the 19 independent companies of the regions are directly under the regional commander.

NOTES ON MILITARY REVIEWS.

September, 1928.

"Revue Militaire Française."

Published by Berger-Levrault. Price, 5·50 francs.

1. *The Battle of the Avre* (Continued.) By Commandant d'Argenlieu. (Part 5.)

In this instalment the fighting on the 30th March on General Debeney's First Army front is dealt with. The orders issued on the evening of the 29th March by General Fayolle, commanding the *Groupeement d'Armée de Reserve* contained the same objects, namely, the gap between the Oise and the Somme to be closed, and the front to be established as far east of Amiens as possible. General Debeney endeavoured again to restore the chain of command among scattered infantry and artillery units of his corps. During the 30th, German attacks gained ground at Moreuil, and to the south as far as Mesnil-St. Georges. Further north the attacks of the enemy were held and ground was actually regained by counter-attack. A brilliant counter-attack by a Canadian mounted brigade is especially described.

2. *From the Old to the New: Medical Revelations.* By Médecin-général Uzac. (Part 1.)

The author points out that there can be no finality in military regulations; they are intended as a guide; but must develop to suit the ever changing conditions of warfare. He works on this theme, and presents an interesting analysis of the developments of the medical organization of the French Army in the moving warfare of 1914, during the subsequent conditions of stabilization and during the critical period of 1917.

3. *The Passage of Rivers in Face of the Enemy.* (Continued.) By Colonel Baills. (Part 3.)

The author analyses the circumstances of the following river crossings during 1914-18:—

- (a) Of the Vistula by the Austro-Germans in July, 1915.
- (b) Of the Danube by the Austro-Germans in October, 1915.
- (c) Of the Danube by the Germans on the 1st September, 1917.
- (d) Of the Marne by the Germans on the 15th July, 1918.

The latter is particularly interesting. Of the deductions drawn, the following may be noted :—

- (i) The position recommended for the defence of a river line ; 4 to 5 kilometres from the river itself.
 - (ii) The large amount of bridging equipment and labour allotted to each offensive operation.
 - (iii) The essential necessity for the traffic capacity of bridges to approximate to that of the roads, with special regard to the permissible speed of traffic on both.
 - (iv) The desirability of ear-marking, in peace time, for mobilization, the bridging resources of a country.
4. *A Study of the Offensive Operations for the Conquest and "Cleaning Up" of La Ghouta (Oasis of Damascus).* 15th July to 8th September, 1926. By Colonel Bru and Commandant Cortot.

This second and final instalment deals with the methods adopted by the French for the exploitation of their success and the 'cleaning up' of the rebel area in Syria from 23rd July to 28th September, 1926. The lessons drawn from the operations are :—

- (a) The necessity for breadth of vision on the part of the high command from the outset for such an operation to ensure the application of adequate means permitting to vigorous action.
 - (b) The value of surprise.
 - (c) Infantry and tanks can alone cope with such an enemy in a country similar to Syria.
 - (d) Clearing up must be done by really mobile and light columns.
5. *The Corps of "Officers d'Administration" of the Staff and for Recruiting.* By Administration Officer Sanguinède.

Of interest to the French Army only, where the subject has recently been much discussed in connection with the new organization laws.

October, 1928.

1. *The Battle of the Avre.* By Commandant Argenlieu. (Conclusion.)

In this last instalment the movements of the German divisions opposed to the 1st Army are briefly described from 26th to 30th

March, 1918. Commandant Argenlieu then draws attention to the main lessons brought out in this battle. These he considers are :—

- (a) The paramount importance of the “will to win” in the higher command, and the moral effect among the troops of complete confidence in their commander.
- (b) The difficulties experienced by troops accustomed only to trench warfare when suddenly compelled to fight in the open—particularly as regards liaison between infantry and artillery.
- (c) The general organization of the front into sectors.
- (d) The difficulty in a large formation of rapidly changing front to a flank.
- (e) The inevitable lapse of time between the giving of an order and its execution.

The author emphasises that in drawing these lessons, one must not forget the “atmosphere” in which troops and staffs were working.

2. *Passage of Rivers in Face of the Enemy.* (Part 4.) By Colonel Baills.

The author deals with the crossing of the Piavé by the Austro-German 24th Corps at Montello in June, 1918.

The sector chosen for the attack was at a bend in the river where both flanks could be enfiladed at long range by the Italian artillery. Although neutralization of this flanking fire seemed the obvious essential to success, no adequate steps were taken to ensure it.

Details are given of the distribution of R. E. stores, which show the enormous quantity of material required for the passage of a large river.

In the general plan of attack it is noticeable that there were no divisions in support, and from an infantry point of view the operation seems to have been planned on the lines of a peace time manoeuvre; a *résumé* of the orders for the attack is given, and those referring to the crossing are given in full. These orders are interesting, in that while otherwise conforming generally to present day French and German regulations, they envisage the construction of medium bridges while the crossings are still under enemy artillery fire.

The author draws the following conclusions :—

- (a) With two forces of equal fighting value, the enemy fire must be definitely mastered before medium bridges are constructed.
- (b) Adequate reserves of material must be provided.
- (c) It is essential to institute a system for watching the river above the bridges, so that steps may be taken to prevent them being broken by floating wreckage.

3. *General Brialmont.* By Lieut.-Colonel Mayer.

A short autobiography of General H. A. Brialmont (1821-1908). An engineer officer who was responsible for the design of the fortified camp at Anvers. Of historical interest only.

4. *From the Old to the New Medical Regulations.* (Part 2.)
By-Médecin Général Uzac.

The author discusses the modifications which have taken place in Army medical organization as the result of war experience. Regimental personnel, except for further centralization at regimental headquarters, has been little altered.

The transport units in use in the forward zone are then dealt with, and it is interesting to note that in 1920-1921 no less than 60 Bréguet ambulance aeroplanes were employed in Syria and Morocco.

The writer concludes his article by tracing the gradual development of the casualty clearing stations and general hospitals, and the system of evacuation from 1914 to 1918. In all essentials this development followed the same lines as in our own Army.

5. *The Operation at Bou-Ganous on the 25th September, 1925.*
By Colonel Goudot.

This is an interesting description of an infantry brigade-supported by artillery and tanks operating at Bou-Ganous in Morocco.

The objects of the operation were—

- (a) To establish a new post.
- (b) To supply and enlarge the post already in existence at Bou-Ganous.

A detailed description of the preliminary dispositions and of the fighting is given, the efficient defensive dispositions of the enemy

being remarkable. The author attributes the success of the operation to—

- (1) The extremely detailed reconnaissance, first by air photographs, then on the ground.
- (2) The careful organization of "mopping up" parties.
- (3) The excellent co-operation between all arms.

GREECE.

Greco-Italian Pact.

After recovering from an attack of dengue-fever M. Venizelos proceeded to Rome on 20th September in order to sign the Greco-Italian Pact. This Pact has now been signed and M. Venizelos has continued on a short European tour before returning to Greece.

The Pact contains a large number of articles, none of which are definitely of a military nature. The object of the Pact is to provide for neutrality in case either country is attacked by a third party, and to insist on arbitration if a conflict between the two countries cannot be settled by ordinary diplomatic methods. Should both sides be threatened by another Power they agree to take concerted action. The majority of the articles deal with the constitution of the tribunal of arbitration and general principles on which disputed questions are to be settled.

After signing the Treaty M. Venizelos made a statement in which he points out that Greece has never had any intention of establishing a port on the Adriatic. The question cropped up during the Balkan War of 1912-13 when M. Venizelos stopped the Greek Army from occupying the port of Valona, and he states again that Greece has no political views with regard to the Adriatic. This is naturally a matter of satisfaction to the Italian Government.

Relations with Turkey.

M. Venizelos has been asked by the Turkish Ambassador in Rome to go to Angora in order to sign a similar Treaty with the Turks. He has refused, however, partly on the grounds of his health, but also because he considers that the complicated questions regarding the exchanged Turkish and Greek populations must first be settled before a Treaty is signed. The Exchange Commission is again grappling with this question and, judging by M. Venizelos' activity in signing the Greco-Italian Treaty as early as possible, it is

to be hoped that he will take similar steps to ensure that outstanding questions between Turkey and Greece are also settled quickly, so that a Treaty can be signed between these two countries. It will be remembered that negotiations were in progress some time ago, but that Turkey eventually signed a Treaty with Italy and not with Greece. According to the latest information it seems possible that M. Venizelos may change his mind and go to Angora after all.

MEXICO.

Sport in the Army.

The popularity of polo in the Mexican Army has increased steadily since 1924. To celebrate the opening of the 1927-28 season a pony show was held in Mexico City, in which 13 teams entered, each putting in 4 ponies. The medal for the best pony was awarded to a mare belonging to General Amaro, Minister for War; the same General's first pony had been placed *hors de concours* on account of having won the medal of the American Polo Pony Association in the previous year. After the pony show, the finals of various competitions were played off, in the principal of which the General Staff team, captained by General Amaro, was victorious. The General Staff team, indeed, appears to have had an almost uninterrupted series of successes in this and other tournaments, which may possibly indicate that proficiency at polo is considered as a factor of some importance in the appointment of officers to the Staff, a significant indication of the introduction of enlightened ideas into Mexico.

On 20th September, the 17th Mexican Cavalry Regiment, stationed at Matamoros on the Texas border, entertained the Officers of the 12th U. S. Cavalry to lunch. Various speeches were made referring to the excellent relations which had been established between the cavalry regiments on either side of the frontier as a result of polo tournaments, horse shows, &c., held between them in recent years.

In addition to the personal impulse which General Amaro has given to polo in the army, he has paid great attention to fostering interest in other forms of sport, notably baseball, Rugby football and basket ball. The consequent improvement in the morale of the Army has been remarkable.

MOROCCO.

French captives in Spanish enclave of Rio de Oro.

For many months the French have been greatly troubled with the existing state of insecurity in the Spanish colony of Rio de Oro on

the west coast of Africa, where the Spanish authorities are quite unable to maintain order.

In 1927 bands of raiders from the Rio de Oro were active in the Algerian Desert, in Mauretania, and in Southern Morocco. In addition, various airmen flying on the Casablanca—Dakar air route who were forced to land in this territory have been held to ransom by the tribesmen.

A serious situation has now arisen; in July, 1928, two French airmen flying on the South African route *via* Dakar were forced to land and were captured. They were handed over by their captors to a powerful dissident tribe, who have refused to release them unless they are exchanged for various tribesmen captured by the French during their raids in the French territory, and unless a ridiculously large ransom is paid.

These airmen have now been in captivity for nearly three months and all efforts to obtain their release have been unavailing. The French press in Morocco is embittered and demands that either the Spanish authorities should re-establish order in Spanish territory or else that the French authorities in Mauretania and Southern Morocco should be allowed to cross the Spanish frontier and take action against the tribe concerned.

This case is of importance as bringing to a head the Franco-Spanish differences as regards the Rio de Oro. Apart from the maintenance of order in French territory, and the establishment of order in Morocco south of the Atlas, the existing state of affairs is a serious threat to the French South American Air Service.

PERSIA.

Air route to India.

Subject to various conditions and restrictions, the Persian Government have now permitted Imperial Airways to use the South Persian route between Basra and Karachi, with aerodromes at Bushire and Jask, and with an emergency landing ground at Lingah, for a period of three years from 1st January 1929.

It appears, however, that Imperial Airways will not be in a position to commence their regular weekly service between England and India before 1st April.

Air mails.

The Junkers contract for the air mail service in Persia is as follows :—

- (a) Tehran—Ispahan—Shiraz—Bushire every Thursday, returning on the same day.
- (b) Tehran—Hamadan—Kermanshah—Qasr-i-Shirin every Saturday, returning to Kermanshah the same day and completing the journey on the following morning.

The air mail service for Russia has now been closed down for the winter months, while the Tehran—Meshed service, having lost its initial popularity, has been temporarily suspended.

Transport.

During 1927-28, 1,112 cars and 976 lorries were imported into Persia, of which 5 per cent. were British, 10 per cent. Continental and the remainder American.

PERU.

Recent Changes in Army Organization.

The following new units have recently been formed :—

- (a) A signal company (strength approximately 100), to act as a training centre for the signalling services of the army, which at present are non-existent.
- (b) A machine gun company (strength approximately 90), intended as a demonstration company and as a training centre for officers and other ranks of divisional machine gun units.
- (c) Mounted infantry companies. A mounted infantry company will in future be attached to each of the four Divisional Cavalry Regiments.
- (d) An anti-aircraft company. Details as to the organization of this unit have not yet been received.

ROUMANIA.

Manœuvres.

It is stated that the Roumanian manœuvres were cancelled owing to the failure of the peasants' maize crop throughout the southern half of Roumania, including the area in which the operations were to have been held. In 1928, with too wet a spring and too hot a summer, the maize crop produced no grain at all, and the Roumanian authorities felt that they could not impose the burden of manœuvres on the population of these hard-hit districts

Air Forces.

On 6th September, a Vickers-Napier-Vivid aeroplane was flown in the day from England, *via* Germany and Yugo-Slavia, to Roumania, by the principal experimental pilot to Messrs. Vickers at Weybridge. The visit was in connection with the open competition for foreign aircraft which was to have been held originally in August but was then postponed to allow more time for competitors.

At a recent Little Entente Air Meeting held at Prague, the Roumanians were very successful. With flying machines recently bought from France, all five pilots completed the circular course Prague—Warsaw—Bucharest—Belgrade—Prague, and so won the Polish prize for aggregate performance. Actually Roumanian machines finished second and fourth in order of arrival. The competitors were given a tremendous reception at Bucharest on their return, and received distinguished military decorations.

SPAIN.

The Political Situation.

The fifth Anniversary of the Spanish Directorate was celebrated with a great display of enthusiasm in Madrid on 13th September, 1928. Patriotic celebrations were held in provincial centres on other days, in order to allow provincial participation in the National Demonstration at Madrid.

On 11th September, rumours of a conspiracy against the Government began to circulate and numerous arrests were made. Contrary to the greatly exaggerated accounts of this plot in the foreign press, no disorders have been reported in any part of Spain and the Spanish Government have had the situation completely in hand.

The hero of the celebration was, of course, Primo de Rivera, the Marquis d'Estella. He not only took the leading part in Madrid but on the following Sunday gave another proof of his great moral and physical courage by going to Barcelona, the town most antagonistic to his *régime*.

H. M. King Alfonso was absent during these celebrations paying a return visit to the King of Sweden.

SYRIA.

General.

As stated in the August number of this Summary (Vol. 13, No. 4, page 173), the French High Commissioner was forced to suspend the Syrian Constituent Assembly for three months from 13th August.

The controversial clauses in the draft constitution to which the French naturally took exception were the following :—

The recognition of the boundaries of Syria as being those of the Arab countries formerly under Turkey “ without regard to the divisions made after the Great War ; the right of the President to grant pardons and amnesties ; the right to raise a national army ; the right to have foreign representatives accredited to the State of Syria, and to possess diplomatic representatives at the capitals of foreign states, and the right of the President to declare martial law. No mention was made of the Mandatory Power whatever.

The six clauses in question are obviously quite incompatible with the state of the Mandate (or of any mandatory system), and should not properly have been mentioned in the drawing up of the constitution at all, involving, as they do, questions which could in any case only have been dealt with by some form of treaty between the Mandatory Power and the Syrian State, after the constitution had been agreed to.

The implied demand for the annexation of the Arab countries under British mandate is probably not meant very seriously. The aim of this clause is probably the return to Syria of the port of Tripoli and the rich plain of Bekaa, east of Tripoli, now incorporated in the Lebanese State.

Effective precautions were at once taken by the French authorities and since the adjournment of the Assembly the situation has become easier and no disorders have been reported.

The Northern Frontier Boundary Commission.

No agreement has been arrived at up to the present by direct negotiations between the French and Turkish Governments.

Meanwhile the situation in the Bec du Canard is highly unsatisfactory. Turkish bands have carried out minor raids in this area every few days for the past three months.

TURKEY.

The new alphabet.

The new Turkish alphabet is being pushed on apace and it should be in general use by the beginning of December. The Ghazi is acting as the chief professor and during his summer travels has been giving lectures on the alphabet at various towns and villages all over

the country. Anyone opposing the alphabet has been dealt with by the law courts. The alphabet has been giving everyone in Turkey so much occupation that little else has happened in the political world.

UNITED STATES.

Commercial Aviation in Central America.

Backed by the United States Post Office Department, American interests have launched an ambitious scheme for commercial air services in Central America and the Caribbean, which it is no doubt intended to extend to South America.

The two main routes to be developed are —

(a) *Key West to the Canal Zone.*

(b) *Key West to Porto Rico.*

(a) *Key West to the Canal Zone.*

This route is 1,640 miles long, and provides for stops at Havana (Cuba), Merida (Mexico), Belize (British Honduras), Tegucigalpa (Honduras), Managua (Nicaragua), San Jose (Costa Rica), and Cristobal (Panama Zone).

Under the terms of the Pan-American Convention, any signatory nation has the right to prohibit the planes of another nation from flying over fortified zones such as the canal zone, but in doing so equal treatment must be given to the aviation companies of all signatory nations. It appears that the U. S. A. have already declined to give permission for planes of the Scadta, a Colombian Company, to land in the canal zone, and it is therefore doubtful whether they have the right to afford similar permission to an American Company. The Post Office Department has awarded a contract to Pan-American Airways (Inc.), for carrying mails over this route with a daily service, and it has reserved to itself the right to include Guatemala and Salvador in the route and also to extend it southwards to Colombia, Venezuela, Trinidad, British Guiana and Dutch Guiana.

(b) *Key West to Porto Rico.*

This route is laid via Havana, Santiago de Cuba, Porto Prince Santo Domingo to San Juan, Porto Rico. The Post Office Department has received bids for the mail contract from both the Pan-American Airways and the West Indies Aerial Express (Inc.). The award is being held up pending further investigation.

The Pan-American Company, however, has already signed a contract with the President of Cuba by which it is granted free and exclusive use of existing aerodromes in Cuba, and every facility for carrying out its operations in that island. The terms of the contract are very favourable to the Company and amount to a monopoly.

It has also been announced that the Post Office has awarded to Pan-American Airways a 10 years' contract for a thrice weekly mail service between Miami, Nassau, and the Bahamas.

According to the Press an organization has been formed in New York for controlling all the above development, styled "The Aviation Corporation of the Americas." The Pan-American Airways Company will operate under the direction of this new organization.

U. S. S. R.

Laws of military service, terms of service and periods of training in the Soviet Army.

1. *Laws of military service.*

Military service in the U. S. S. R. is based on the Law of Military Service, dated 18th September, 1925, amended and amplified by a law of 8th August, 1928.

Military Service is compulsory for all citizens (male and female) of the U. S. S. R. between the ages of 19 and 40.

The honour of fighting for their country is reserved exclusively for the workers, other classes being employed in non-combatant duties.

2. *Pre-enrolment training.*

Male citizens undergo one month's pre-enrolment training in each of their 20th and 21st years.

3. *Terms of service and periods of training in the Active Army.*

Many citizens serve in the Active Army for the 5 years following enrolment, which takes place in the autumn of the conscript's 22nd year, as follows:—

(a) *In regular formations—*

Cavalry	} 2 years' training.
Artillery ..	..
Infantry ..	..
Engineers ..	..
Coast defence	..	} 3 years' training.
Air arm ..	..
Navy	4 years' training.

after which the man is sent on long leave to complete his 5 years'

Active service. During this leave he may be recalled for a total of two months' training, but not exceeding one month in each year.

(b) *In territorial formations.*—In the first year, one period of 3 months for all arms.

In the remaining four years, periods of instruction totalling :—

For infantry and artillery 5 months.

For engineers and non-divisional troops .. 6 months.

For cavalry 8 months.

but not exceeding 2 months in any one year.

(c) *Industrial military service.*—This is a new type of service introduced by the law of 1928 for men with higher technical education. For these men, service in the Active Army can be replaced by service in factories and works.

Service is for 2 years.

4. *Service in the Reserve.*

Completes the 13 years up to the age of 40, and is sub-divided as follows :—

First category 7 years up to the 34th year.

Second category 6 years up to the 40th year.

During this Reserve service, the soldier is liable to be recalled for periods up to a total of 3 months.

CORRESPONDENCE.

Migration and Overseas Settlement Bureau.

A new phase of Migration work is being developed by the Over-Seas League, the object being to assist men of moderate means such as ex-officers of the Services, ex-Civil Servants and others, to settle in the Dominions. Anxious to make its contribution toward the building up of a strong United Empire, the League believes that it would be of mutual advantage, both to the Mother Country and to the Dominions, if the class of men referred to can be happily assimilated into the life over-seas.

Many such men are looking for a wider and less conventional life than is possible in the Old Country and are desiring to transfer their homes to countries where their incomes will go further, where taxation is lighter, and where their children will have a better prospect of a prosperous and happy future. They are also looking for a place in which to settle where a good climate and a reasonable amount of social and sporting life are to be found.

The object of the League is to supplement the work of Governments and Migration Societies, confining its activities to the needs of a class of settler who is in danger of being over-looked in the field of migration work and to whom the League believes it can be of service. The organisation is of an entirely free and voluntary character, the aim of the League being to make use of its world-wide organisation to help the class of men described. Its sole objective is to meet a very real need by providing a practical plan by which many most desirable settlers may be helped to find their way into a community of congenial people, with benefit to themselves and pleasure to those among whom they settle.

The Central Committee of the Migration Bureau at the Headquarters of the League in London includes prominent business men and representatives of the Navy, Army and Air Force, Retired Naval Officers' Association, and Oversea Governments. It has the official approval of the Overseas Settlement Committee of the British Government.

The Bureau works through Advisory Committees set up in the Oversea countries. These are composed of men of good repute on whose advice a newcomer can place implicit reliance. It has been strictly laid down that no one with any interest in the sale of land or the commercial side of the business of immigration is eligible for membership of any such Committee. Their work is of an entirely honorary nature. They furnish first hand information regarding their districts, and extend a welcome to prospective settlers who are introduced to them by the London Committee.

Those desirous of taking advantage of the Over-Seas League Migration Scheme will—on application to the Office—receive the following advantages:—

(1) They are shown comprehensive reports drafted by the committees overseas, covering all sides of life likely to interest the prospective settler; also private letters from individual members of the committees describing their experience in those countries. This information contains a personal touch which is of great value to the prospective settler. It covers such ground as housing conditions, cost of land, cost of living, facilities for augmenting income, educational facilities, servants and labour, games, shooting, fishing, and other forms of sport, social amenities, climate and accessibility to railways, shops, etc. By means of this information they are able to sum up the relative advantages of the various countries. The Central Committee is willing to advise all applicants how best to utilise their resources.

(2) If so desired, questionnaires from individual applicants are sent to the committees overseas, who answer all such particular enquiries, giving any additional information required. No cost to the applicant is involved.

(3) On the newcomers' arrival in the country to which they elect to go, they are met by a representative of the Committee. Suitable accommodation is found for them; they are shown round the country; given the benefit of expert advice; passed on if they so desire to other committees; and everything possible is done to ensure their satisfactory settlement.

All enquiries and other communications should be addressed to: The Hon. Secretary, Migration & Overseas Settlement Bureau, Overseas League, 4 and 5 Park Place, St. James' Street, London, S. W. 1.

REVIEWS.

SOME ASPECTS OF MECHANIZATION.

By

COLONEL H. ROWAN-ROBINSON, O.M.G., D.S.O., R.A.

Messrs. William Clowes & Sons, Ltd., London, 1928, 3s. 6d.

The impression left on the mind after reading this book is "Fog." Though there are a considerable number of new ideas and sound arguments, the writer has all through dealt theoretically in generalities, while many of his statements are distinctly sweeping.

Firstly, the author talks about a "mechanised army." What exactly is meant by this high-sounding phrase? Does he mean that there are to be no cavalry, no pack artillery, no infantry save those carried in motor vehicles? If so how many vehicles does he consider necessary for such an army? Apart from "working" vehicles, there must be the "spare" within formations, the reserves on the L. of C., the vehicles for training reinforcements, etc. Then again, think of the man-power "tied up" in repairs, salvage, and factories at Home. Apart from the colossal wastage of machines in war, there is the question of money. Can any nation in peace afford to have a completely mechanized army or in war the plant etc., to maintain a national "mechanized army" of sufficient size? These few thoughts alone seem to indicate that it is impossible to have a completely mechanized army and that partial mechanization is all that can be aimed at. If this contention is true, speculation in the realm of the never—never land seems unreal.

The author states that "technical difficulties if specially stressed, might obscure wider issues. . . ." Yes, but surely it is not much use imagining a visit to the moon if you do not see your way to getting there! No power on earth can ever make a machine do all that a man on his feet can.

Mechanization enthusiasts, it is wellknown, are apt to overlook hard facts. "An average rate of approach of from 20 m. p. h. . . ." is surely impossible except for very short distances over ideal country. Any mechanical force must keep more or less united and the pace of the force is thus dependent on those vehicles which at any moment have the most difficult ground to cross. Again, is 20 m.p.h. possible as an average over unrecognised country, when 35-40 m. p. h. is an excellent average with a good car on main roads?

The writer is interesting in his ideas of air-control, but is it practical? "On the ground he (*i.e.*, the commander) is blind, in the air he can see."— a meretricious sentence. How much can you really see from the air, even if a trained observer, and have commanders the time, opportunity or constant practice to be such? There is also the danger of wrong impressions. Besides, why is the commander blind on the ground? Cannot his force move by bounds, reporting location and situation by wireless as required? His own airforce will do ditto regarding the enemy far more accurately than he will, and he will have all the advantages of the quiet, the comfort and the proper perspective in a headquarters on the ground.

As an amplification of his ideas on air-control, the author says "there will be at least.....in the air, the force commander, the artillery commander, the officer conducting reconnaissance, and the senior formation leader in the airforce . . ". How on earth, or rather in the air, will these four officers co-operate during a battle, plans for which (particularly with mechanized forces) cannot go beyond the initial clash?

The author is on firmer ground in his remarks on discipline, for there can be little doubt, when one sees the tendency to grime of the average mechanic, that discipline would tend to be less rigid with mechanized forces than, for instance, in the case of infantry with their drill parades.

The chapter on "the defensive" is a valiant attempt to get down to "brass tacks." It seems that this question resolves itself into two parts (*i*) by day (*ii*) by night.

By day, the defensive must surely be based on the counter-attack. The idea of sitting in strength on a position is obviously unsound. There are always obstacles and defiles in any country: therefore, a light screen to watch this outpost zone combined with a disposition of the main forces to counter-attack in the battle zone would seem to be correct. The ground selected for the defensive would primarily be such as would be suitable for a counter-attack.

By night, are mechanized forces going to attack? Would any one care to ride a horse over unreconnoitred country at night?

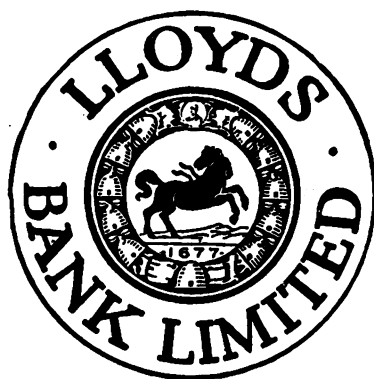
Do the enemy wish for a "dog fight" at close range in the dark with the defender knowing the ground and using searchlights? Is surprise in any way possible with the noise of the approaching enemy heard miles away? Will the enemy commander dare to

risk even a portion of his force on such a hazardous enterprise? Surely, the answer is that at night in the forward areas fighting between mechanical forces will cease and the problem is one merely of minor local defence.

The chapter on "India and Mechanization" will interest readers of this Journal, but it is now largely pushing at an open door. "The attitude of the Indian Government is not one of refusal, but of extreme caution"—quite so, and rightly so. With so large a portion of the Indian budget inevitably spent on military needs, it obviously behoves the military authorities to look well before they leap. The problem for the Army in India is totally different to that at Home. The organization necessary is such that defence of the frontiers combined with a capacity to take part in a major war may be possible. Moreover, at present, India is dependent on Home for her mechanical vehicles. It is the advent of the 6-wheeler which has made mechanization possible in India. It is obviously sound to mechanize in India from the rearward services forward rather than *vice versa*. One cannot have mechanized infantry, machine gun squadrons, etc., supplied by bullock companies! Therefore as suggested by the author, to mechanize the fighting troops now would be to "put the cart before the horse"! Again, mechanical equipments in India must approximate as closely as possible to those at Home, if for no other reason than on the grounds of manufacturing supply. This is not "a factor of minor importance." As has been stated in the Assembly, the military authorities in India have had this whole matter under close consideration since the war and have now seen their way to starting to put into effect a comprehensive mechanization programme.

It is quite realized that Colonel Rowan-Robinson has, no doubt on purpose, somewhat overpainted the picture, so as to draw attention to this vital subject. There is however in this a danger that the whole book may be dismissed as imaginary.

The remarks in this critique are made on certain parts of his book, selected more or less at random and could be continued *ad infinitum*. These remarks are admittedly destructive, not constructive because the critic cannot visualize the state of affairs envisaged by the author. The book, however, is one that bears careful reading as it puts forward many new ideas and shows a considerable amount of imagination, perhaps rather of the Jules Verne type.



(Incorporated in England.)

HEAD OFFICE : LONDON, E. C. 3.

EASTERN DEPARTMENT :

14, KING WILLIAM ST., LONDON, E. C. 4.

CAPITAL—

SUBSCRIBED	.. ..	£ 73,302,076
PAID UP	.. ..	£ 15,810,252
RESERVE FUND	.. ..	£ 10,000,000
DEPOSITS, &c. (31-12-27)	.. ..	£ 358,657,619

OVER 1,700 OFFICES IN ENGLAND AND WALES.

BRANCHES IN THE EAST :

Bombay, Calcutta, Karachi, Rangoon, Delhi, New Delhi,
Simla, Rawalpindi, Murree, Srinagar (Kashmir),
Gulmarg, Lahore, Chowringhee Calcutta.

GENERAL BANKING AND EXCHANGE business of every description transacted, including the issuing of **WORLD LETTERS OF CREDIT** payable throughout the World. **SAVINGS BANK ACCOUNTS** opened at any of the Bank's Branches in India or Burmah which are **WITHDRAWABLE BY CHEQUE**. Particulars on application.

Thos. Cook & Son, Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Passages engaged by all lines at same fares as charged by Steamship Companies. Holders of Cook's tickets met at all ports. Outward passages engaged and tickets supplied from any part of the world to India. Usual reductions obtained for Missionaries, Railway Officials, Families, etc.

Baggage received, stored and forwarded. Cargo shipped to all parts of the world at current rates. Inward consignments such as Hardware, Piecegoods, Machinery Stores, etc., for Messes and Clubs, cleared and forwarded at special rates. Insurance of all kinds effected on Baggage, Cargo, Livestock, Mess Property, etc.

The Oriental Traveller's Gazette containing sailing dates and fares of all steamers, together with invaluable information for travellers, sent post free on application.

Government Certificates accepted. No deposit required.

Thos. Cook & Son (Bankers), Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Current and Fixed Deposit Accounts opened. Interest allowed. Pay and Pensions collected. Periodical remittances made at current rates. Insurance premia paid.

Letters of Credit and Traveller's Cheques issued, encashable throughout the world.

Drafts granted and Telegraphic Transfers effected on all principal towns.

Insurance Life, Accident, Fire, Burglary, effected. Prospectus on application.

160 OFFICES THROUGHOUT THE WORLD.

**EASTERN OFFICES : BOMBAY, BAGHDAD, DELHI, SIMLA,
CALCUTTA, RANGOON, MADRAS, COLOMBO, SINGAPORE.**



E. DUCKETT & Co

[By GOVERNMENT APPOINTMENT]

EAST STREET POONA

MONUMENTAL SCULPTORS

POWER MACHINERY & TOOLS

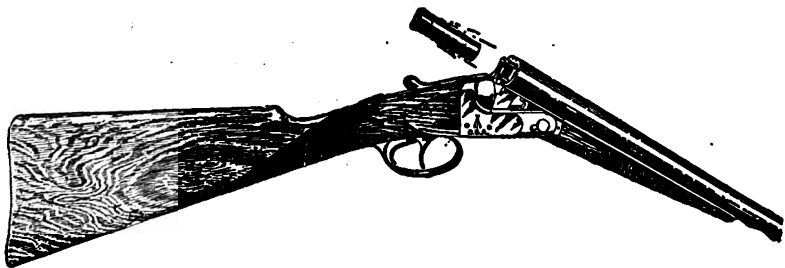
**ARTISTIC MEMORIALS IN SELECTED
MARBLE ERECTED ANYWHERE IN INDIA**

ELAHEE BUKSH & Co.,

ARMS AND AMMUNITION DEALERS,

== MEERUT AND KASHMERE GATE, DELHI ==

By Special Appointment



To H. E. the Earl of Reading, Viceroy & Governor-General.

LARGE STOCK OF

**Latest Model Shot Guns, Rifles, Pistols, Revolvers
and Ammunition.**

CHEAP AND RELIABLE

Shot Gun Cartridges ! A Speciality !! Record Sale !!!

Illustrated Catalogue Free.

A useful compendium of information for all who have interests in Asia.

£ 1
per annum

ASIATIC REVIEW

5s.
per issue.

Each issue contains nearly 200 pages and is generally illustrated.

THE VERDICT OF THE PRESS.

ENGLAND. *The Times*: "The January issue brings that quarterly to the fortieth year of its steadfast devotion to the mission of providing a platform for information and opinion on Asiatic affairs—political, social, literary, educational, commercial, artistic and general.....many eminent names appear in the list of contributors."

U. S. A. *New York Tribune*: "A well-informed quarterly dealing with Oriental affairs."

FRANCE. *Les Dernieres Nouvelles* (Strasbourg): "La grande revue de Londres."

INDIA. *Bombay Daily Mail*: "Of special interest as affecting existing trade relations."

The following articles on India were published in the Review during 1927;—

India at the Imperial Conference by THE MAHARAJA OF BURDWAN.

The Indian Co-operative Movement, by Sir LALUBHAI SAMALDAS.

Rural India and the Royal Commission, by Sir PATRICK FAGAN.

*Post and Telegraph Work in India, by Sir GEOFFREY CLARKE.

*Indian Forest Administration, by W. F. PERREE.

*India's Cotton Problem, by H. A. F. LINDSAY.

*The Indian Navy, by P. R. CADELL.

*Lectures delivered before the East India Association.

THE REVIEW PUBLISHES IN FULL

THE PROCEEDINGS OF THE EAST INDIA ASSOCIATION.

NEW FEATURES:—

1.—THE ASIAN CIRCLE.

A SURVEY OF ASIATIC AFFAIRS.

(Published by arrangement in the *Asiatic Review*).

THE ASIAN CIRCLE is conducted by a group with personal knowledge of the various parts of Asia, and through the collective experience of its members aims at giving to the public an informed, progressive, and disinterested view of Asian affairs, both in detail and as a whole. Its membership includes:

The Right Hon. LORD MESTON, K. C. S. I. (President).

Sir GEORGE BOUGHEY.

Sir PATRICK FAGAN, K. C. I. E., C. S. I.

Sir JOHN CUMMING, K. C. I. E., C. S. I.

Lieut.-General Sir GEORGE MACMUNN, K. C. B., K. C. S. I., D. S. O.

2.—NETHERLANDS. (INDIES SECTION)

ARTICLES by expert writers on Java and Sumatra.

3.—FRENCH COLONIES.

Special contributions concerning Syria and Indo-China.

4.—THE INNER EAST.

(Record of Events in Central Asia).

How to obtain THE ASIATIC REVIEW.

(41st year of Publication).

Please use this SUBSCRIPTION ORDER FORM

To EAST AND WEST, LTD.,

3, Victoria Street, London, S. W. 1.

Please send THE ASIATIC REVIEW for Twelve Months, beginning

with.....to.....

for which I enclose equivalent of £1 (One Pound Sterling).

(Please write full name and address distinctly).

By Appointment to
THE LORD IRWIN,
VICEROY & GOVERNOR-GENERAL
OF INDIA.



By Appointment to
H. M. THE KING.



By Appointment to
H. R. H. THE PRINCE OF WALES.

RANKEN & Co., Ltd.,

SIMLA, DELHI, LAHORE,
RAWALPINDI & MURREE.

ESTABLISHED IN CALCUTTA 1770.

CIVIL & MILITARY TAILORS,
GENTLEMAN'S OUTFITTERS,
AND BREECHES MAKERS.

ESTIMATES SUPPLIED FOR
FULL-DRESS AND MESS DRESS
UNIFORMS OF ALL REGIMENTS.

By Appointment to
H. E. Field Marshal Sir William R. BIRDWOOD, Bart.,
G.C.B., G.C.M.G., K.C.S.I., C.I.E., D.S.O.,
Commander-in-Chief in India.

COX & KINGS

(AGENTS) LIMITED,

BOMBAY,

CALCUTTA, KARACHI, RAWALPINDI.

TELEGRAMS : " COXSHIP."

SPECIAL OFF SEASON FARES TO ENGLAND

**INSTEAD OF GOING TO THE HILLS
SPEND YOUR SHORT LEAVE AT HOME**

FULL DETAILS ON APPLICATION

IF YOUR LEAVE IS DUE

WRITE NOW TO

COX & KINGS

(AGENTS) LIMITED,

GENERAL PASSENGER, FREIGHT

AND

CLEARING AGENTS.

HEAD OFFICE—13 REGENT ST.,

LONDON, S. W. 1.

BRANCHES AT—

**LIVERPOOL, SOUTHAMPTON, MARSEILLES,
ALEXANDRIA—PORT SAID, CAIRO, JERUSALEM.**

**AGENTS AND CORRESPONDENTS THROUGHOUT
THE WORLD.**

MAPS PUBLISHED BY THE SURVEY OF INDIA

Are obtainable from the Map Record and Issue Office, 13, Wood Street, Calcutta, on the Public Service—on Cash Payment or Book Transfer, and, for private use, on Cash Payment or V. P. P.

Forest maps are obtainable only from the Officer-in-Charge, Forest Map Office, Dehra Dun.

Geological maps are obtainable from the Director, Geological Survey of India, Calcutta.

The Survey of India publish maps for the greater part of SOUTHERN ASIA between the meridians of 44° and 124° East of Greenwich and between parallels 4° and 44° north latitude.

2. Surveys executed after 1905 are classed as "MODERN," those PRIOR to that date are classed as "OLD."

3. Maps are printed in two styles or editions, viz., LAYERED and POLITICAL:—

(a) The LAYERED edition represents a map printed in colours with graduated layer tints of colour to show altitudes, and, shading to emphasize the hills. This edition gives prominence to the physical features.

(b) The POLITICAL edition represents a map printed in colours, but without graduated layer tints. Hills are represented by contours and shading. This edition gives prominence to the Civil Divisions of India which are shown by ribands of colour along boundaries of administrative partitions.

NOTE.—When maps are printed in colours, from mixed or old surveys the edition is styled "PRELIMINARY," and when published in black only or with hills in brown, the edition is styled "PROVISIONAL ISSUE."

4. The series of Modern maps are grouped under three Divisions:—

(I) GEOGRAPHICAL, embracing—

(a) SOUTHERN ASIA SERIES, scale 1 : 2,000,000 or nearly 32 miles to 1 inch in LAYERED and POLITICAL editions, size 36 inches \times 24 inches, price Rs. 6 per copy for the Layered and Rs. 3 per copy for the Political edition.

(b) INDIA AND ADJACENT COUNTRIES, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED and POLITICAL editions, or if from old surveys as PRELIMINARY EDITIONS; size 24 inches \times 19 inches, price Political edition Rs. 1-8-0 per copy or Layered edition Rs. 3 per copy.

(c) INTERNATIONAL MAP OF INDIA, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED edition (without shading of hills), size 30 inches \times 26 inches, price Rs. 3-0-0 per copy.

(II) TOPOGRAPHICAL, comprising maps on:—

(a) SCALE 1"=1 MILE in the POLITICAL edition, size 24 \times 19 inches, price Rs. 1-8-0 per copy.

(b) SCALE 1"=2 MILES in the POLITICAL edition, size 24 \times 19 inches, price Rs. 3 per copy.

(c) SCALE 1"=4 MILES in the LAYERED and POLITICAL editions, size 24 \times 19 inches, price Political edition Rs. 1-8-0 per copy or Layered edition Rs. 3 per copy, and from old surveys as PROVISIONAL ISSUES, price Rs. 1 per copy.

NOTE.—Index charts or Key maps to the Geographical and Topographical series are obtainable gratis.

(III) GENERAL MAPS which include:—

(a) GENERAL MAPS OF INDIA, scale 32 miles to 1 inch, in sets of 12 sheets, each sheet 25 \times 33 inches, in LAYERED and POLITICAL editions, price Political edition, Rs. 12 or Layered edition, Rs. 24 per set, Various maps of India on the same and smaller scales and miscellaneous special maps illustrating Railways, etc.

(b) PROVINCIAL MAPS, on scales 16 miles and 32 miles to 1 inch.

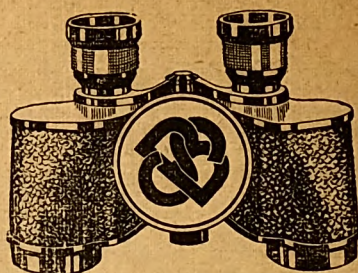
(c) DISTRICT MAPS, on scales 4 miles and 8 miles to 1 inch.

(d) CANTONMENT AND TOWN MAPS AND OTHER MISCELLANEOUS MAPS, of various scales and prices.

5. MAPS CATALOGUES can be obtained at ONE RUPEE per copy, postage As. 8 extra.

6. Maps can be mounted on cloth and folded or mounted on rollers for hanging, etc., at an extra charge.

7. The prices quoted for various maps are exclusive of postage and V. P. P. charges. Any further information may be obtained free of charge from the Officer-in-Charge, Map Record and Issue Office, 13, Wood Street, Calcutta.



BARR & STROUD
BINOCULARS
NONE BETTER---AND THEY'RE BRITISH
SHARP DEFINITION
LARGE FLAT BRILLIANT FIELD
PRISMATIC BINOCULARS.

Type.	Magnification.	Focussing.	Diameter of Objective.		Angular Field.	Field of View in yards at 1,000 yards.	Price.
			Ins.	m/m.			
C. F. 1	6	Central	0.9	23	8°	138	£6 10 0
C. F. 2	6	Central	1.2	30.5	8°	138	£8 2 6
C. F. 3	6	Eyepiece	0.9	23	8°	138	£6 0 0
C. F. 4	6	Eyepiece	1.2	30.5	8°	138	£7 7 6
C. F. 8	8	Central	1.2	30.5	7°	122	£9 10 0

GALILEAN BINOCULARS.

Type.	Magnification.	Diameter of Objective.			Interocular Diameter.	Angular Field.	Field of View in yards at 1,000 yards.	Price.
		Ins.	m/m.	Lines.				
C. A. 2	3½	2.19	55.6	26	65 mm.	61°	112	£2 17 6
C. A. 3	3½	2.0	50.8	24	63.5 mm.	61°	112	£2 12 6
C. A. 3	3½	2.0	50.8	24	62 mm.	61°	112	£2 12 6
C. A. 4	3½	1.75	44.5	21	63.5 mm.	61°	112	£2 7 6
C. A. 4	3½	1.75	44.5	21	62 mm.	61°	112	£2 7 6

Prices include leather cases and straps.

Send for free booklet J "On Binoculars."

BARR & STROUD LTD., ANNIESLAND, GLASGOW and 15
VICTORIA ST., LONDON, S. W. I.

Telegrams—
Telemeter, Glasgow.

Codes—
5th and 6th Edition, A. B. C.

Telegrams—
Retetelet, London.

The JOURNAL of the UNITED SERVICE Institution of India

CONTENTS.

Editorial.

1. The Sack of Seringapatam and the death of Tippoo Sultan, by Lt.-Colonel C. C. R. Murphy.
2. The New Infantry Organization, by Brigadier L. F. Renny, C. M. G., D. S. O.
3. The Evacuation of Gallipoli, by Bt.-Lt.-Colonel H. E. Crocker, C. M. G., D. S. O.
4. Sir Stamford Raffles and Singapore, by "Anonymous".
5. The Power of the Unconscious or Cromwell's Lesson to Posterity, by Captain A. L. Pemberton, M. C.
6. A University Training Corps Annual Camp, by Captain J. W. Pendlebury, M. C.
7. The Evolution of Government in India, by Captain A. G. Fuller.
8. Commissions and Command, by Captain H. Bullock.

Military Notes.
Correspondence.
Reviews.



UNITED SERVICE INSTITUTION OF INDIA.

Rules of Membership.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Auxiliary Force, India, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members, the members of the Diplomatic Corps, foreign, naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms :—

Rupees 120 + entrance fee (Rs. *10) = Rs. 130.

Ordinary Members of the Institution shall be admitted on payment of an entrance fee of Rs. *10 on joining, and an annual subscription of Rs. 10, *to be paid in advance*. The period of subscription commences on 1st January.

Members receive the Journal of the Institution, post free anywhere.

Members may obtain books from the library on paying V. P. postage.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and Library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, *in advance*, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Sergeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 10.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution, on or after the 1st October, will not be charged subscription until the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not been returned by the post.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

*Rs. 7 in the case of British Service Officers serving in India.

Contributions to the Journal.

All papers must be typewritten (in duplicate) and only on one side of the paper. All proper names, countries, towns, rivers, etc., must be in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of A. R. I., para. 204, and King's Regulations, para. 509.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pay the postage.

To

THE SECRETARY,

UNITED SERVICE INSTITUTION OF INDIA, SIMLA.

Sir,

I desire to become a Life
Ordinary Member of the United Service Institution of India, and since I understand that no election is necessary in my case, I have filled in the Bankers' order form below.

Yours faithfully,

Name _____

Corps _____

Permanent address _____

Present address _____

Bankers' Order Form.

(Bankers) Messrs. _____

On receipt of this order, please pay to LLOYD'S BANK, COX'S AND KING'S BRANCH, SIMLA, for the UNITED SERVICE INSTITUTION OF INDIA, the sum of Rs. _____, being (* Entrance Fee and) Subscription, and the sum of Rs. 10-0-0 every succeeding January until further notice.

Ordinary Members.

		Rs. a. p.
* Entrance Fee	--	10 0 0
Annual Subscription	--	10 0 0
Total	--	20 0 0

Signature _____

Date _____

Life Members.

		Rs. a. p.
* Entrance Fee	..	10 0 0
Subscription	--	120 0 0
Total	..	130 0 0

* Rs. 7 only in the case of British Service Officers serving in India.

MILITARY WIDOWS' FUND, —— BRITISH SERVICE ——

THIS FUND enables a British Service (Army) officer, by subscribing from Rs. 6 to Rs. 10 per quarter, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 8,775	to Rs. 12,375
For each child	„ 750	„ „ 1,125

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription and the sum for each child varies with age of child. Subscriptions are based on the rank of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer, but not in excess of 4 years.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return Home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Headquarters, Simla.

For admission and rules apply to :—

The Secretary,
MILITARY WIDOWS' FUND,
Army Headquarters, Simla.

United Service Institution of India.

PATRON :

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS :

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the United Provinces.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Governor of Burma.
His Excellency the Governor of the Central Provinces.
His Excellency the Governor of Assam.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

MEMBERS OF THE COUNCIL, 1929-30.

Ex-officio Members.

- | | |
|---|---|
| 1. The Chief of the General Staff. | 8. The Master-General of Supply in India. |
| 2. The Adjutant-General in India. | 9. The Engineer-in-Chief. |
| 3. The Air Vice-Marshal, Commanding
R. A. F. in India. | 10. The Military Secretary. |
| 4. The Secretary, Army Department. | 11. The Director, Medical Services. |
| 5. Sir Denys Bray, K.C.I.E., C.S.I., C.B.E. | 12. The Director, Royal Indian Marine. |
| 6. H. G. Haig, Esq., C.I.E. | 13. The Director, Military Operations,
General Staff, A. H. Q. |
| 7. The Quartermaster-General in India. | |

Elected Members.

- | | |
|--|--|
| 14. Brigadier H. C. Jackson, C.B., C.M.G.,
D.S.O. | 17. Group Captain R. P. Mills, M.C., A.F.O. |
| 15. Colonel H. F. E. MacMahon,
C.B.E., M.C. | 18. Major A. F. R. Lumby, C.I.E., C.B.E. |
| 16. Colonel W. R. Blackwell, C.M.G. | 19. Major T. C. E. Barstow, O.B.E. |
| | 20. D. Petrie, Esq., C.I.E., C.V.O., C.B.E.,
M.A. |

MEMBERS OF THE EXECUTIVE COMMITTEE, 1929-30.

Elected Members.

- | | |
|---|--|
| 1. Brigadier S. F. Muspratt, C.S.I.,
C.I.E., D.S.O. (President). | 4. Colonel W. R. Blackwell, C.M.G. |
| 2. Brigadier H. C. Jackson, C.B.,
C.M.G., D.S.O. | 5. Group Captain R. P. Mills, M.C., A.F.O. |
| 3. Colonel H. F. E. MacMahon, C.B.E.,
M.C. | 6. Major A. F. R. Lumby, C.I.E., O.B.E. |
| | 7. „ T. C. E. Barstow, O.B.E. |

Additional Members.

- | | |
|---|-------------------------------|
| 8. Brigadier D. G. Lidgeway, D.S.O. | 11. Major C. A. Boyle, D.S.O. |
| 9. Wing Commander R. H. Verney,
O.B.E. | 12. Captain H. Bullock. |
| 10. Lt.-Colonel J. Morrison. | |

SECRETARY & EDITOR
SUPERINTENDENT ..
LIBRARIAN ..
BANKERS ..

.. MAJOR G. B. HENDERSON.
.. CONDR. J. O. ALFORD.
.. MISS W. MCCORMICK.
.. LLOYD'S BANK, LIMITED,
(COX'S AND KING'S BRANCH), SIMLA.

1. The United Service Institution of India is situated at Simla
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed inside front cover.

3. The Reading Room of the Institution is provided with all the leading illustrated papers, newspapers, magazines, and journals of military interest that are published.

4. There is a well-stocked library in the Institution, from which members can obtain books on loan free.

5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in any part of the world.

6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found in para. IV, Secretary's Notes.

7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.

8. When temporarily in the U. K., Officers of the Indian Army can join the Royal United Service Institution, Whitehall, for a period of six months on payment of half a guinea, or for a period of one year on payment of a guinea.

**" IT SHOWS WHAT CAN BE
DONE, GIVEN GOOD
INSTRUCTION "**

*Extract from letter of candidate
who gained 700 marks out of 800
in " Business Organisation "*
after a course with

**EXPERT COACHING
IN
BUSINESS ORGANIZATION
AND POLITICAL ECONOMY
FOR
STAFF COLLEGE
ENTRANCE EXAM.
IS PROVIDED BY**

PITMAN'S CORRESPONDENCE COLLEGE,

**238, SOUTHAMPTON ROW,
LONDON, W.C. 1. ENGLAND.**

PROSPECTUS ON APPLICATION.

United Service Institution of India.

JULY 1929.

CONTENTS.

	PAGE.
Editorial	271
1. The Sack of Seringapatam and the death of Tippoo Sultan	276
2. The New Infantry Organization	282
3. The Evacuation of Gallipoli	288
4. Sir Stamford Raffles and Singapore	293
5. The Power of the Unconscious or Cromwell's Lesson to Posterity	305
6. A University Training Corps Annual Camp	314
7. The Evolution of Government in India	324
8. Commissions and Command	335
Military Notes	341
Correspondence	412

REVIEWS.

1. Artillery : To-day and To-morrow	417
2. Hodson's Horse, 1857—1922	419
3. The History of the Suffolk Regiment, 1914—1927	421
4. The 101st Grenadiers: Historical Record of the Regiment, 1778—1923, 2nd Edition	422
5. The Murmansk Venture	423

I.—New Members

The following new members joined the Institution from 1st March to 31st May 1929:—

ORDINARY MEMBERS.

Captain G. E. B. Stephenson.	Major L. G. Phillips.
Major E. W. Burdett.	Lt.-Colonel C. S. Tute.
Lieut. A. H. G. Ricketts.	Major A. V. T. Wakely.
General Sir Phillip W. Chetwode.	Captain R. W. Kearns.
Flight Lieut. H. E. Falkner.	Colonel L. P. Collins.
Captain A. R. Barker.	Captain E. J. Fulton.
Captain B. S. Sowton.	Captain W. H. Hall.
Lieut. A. F. B. Powell.	Captain D. N. Wimberley.
Captain P. R. Tatham.	Captain W. W. Owbridge.
Major G. S. Leventhorpe.	Major-General G. H. B. Freeth.
	Lieut.-Colonel H. F. Collingridge.

II.—Examinations.

1. The following table shows the campaigns on which the military history papers will be set from October, 1929, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii):—

Serial No.	2	3	4	5
	Date of examination.	Campaign set for the first time.	Campaign set for the second time.	Campaign set of the last time.
1	October, 1929 ..	Egypt and Palestine, from the outbreak of war with Germany to June, 1917.	..	Palestine, 1917-18,
2	March, 1930 ..	Battles of Aubers Ridge, Festubert and Loos, 1915.	Egypt and Palestine, from the outbreak of war with Germany to June, 1917.	..
3	October, 1930. ..	..	Battles of Aubers Ridge, Festubert and Loos, 1915.	Egypt and Palestine, from the outbreak of war with Germany to June, 1917.
4	March, 1931 ..	Marlborough's Campaigns, 1702-1709.	..	Battles of Aubers Ridge, Festubert and Loos, 1915.

2. Before beginning to read Marlborough's Campaigns, candidates are advised to study carefully Section 9, Training and Manœuvre Regulations, 1923.

3. Army Orders 11 and 292 of 1927 and 49 of 1928 were republished as India Army Orders 241 and 768 of 1927 and 359 of 1928, respectively.

4. Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted).

MILITARY HISTORY.

1.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Military Operations France and Belgium, Vol. IV, 1915.

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2.—*The Palestine Campaign.*

A.—OFFICIAL ACCOUNTS.

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. O. G. Powels).

B.—OTHER BOOKS.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The Revolt in the Desert (T. E. Lawrence).

Allenby's Final Triumph (W. T. Massey).

How Jerusalem was Won (W. T. Massey).

Outline of the Egyptian and Palestine Campaigns, 1914-18
(Bowman-Manifold).

L'Attaque du Canal de Suez (Douin).

Army Quarterly—October 1920 (T. E. Lawrence's article).

Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T.
Atkinson's articles).

Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's
article).

Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).

R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's
article).

U. S. I. Journal—October 1923 (Captain Channer's article).

3.—*The Dardanelles Campaign.**Description.*

Naval and Military Despatches .. A clear account of the operations
in detail from the G. H. Q.
standpoint.

Reports of the Dardanelles Com- Fixes responsibility for the in-
mission. ception and conduct of the
campaign. An interesting study
in the relationship between
Politicians and Naval and Military
Experts.

The Dardanelles (Callwell) .. The best account and criticism
of the strategic conduct of the
campaign.

Gallipoli Diary (Sir I. Hamilton) .. The campaign from the point of
view of the C.-in-C. on the
spot.

Life of Lord Kitchener (Arthur) .. Throws considerable light on
Lord Kitchener's direction of
the campaign.

The Dardanelles Campaign
(Nevinson).

Gallipoli (Masfield)

The World Crisis (Winston
Churchill.)

} Well written and picturesque
accounts by eye-witnesses.

Explains his part in inception
the campaign.

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The
Dardanelles."

Secretary's Notes.

- Soldiers and Statesmen (Field-Marshal Sir W. Robertson). From point of view of the C. I. G. S.
- Five years in Turkey (Liman Van Sanders).
- Official Account: Official History of the War, Naval Operations, Vols. II and III.
- Gallipoli Campaign (Outline of Military Operations). By a Student.
- Experiences of a Dugout (Callwell).
- Despatches from the Dardanelles (Ian Hamilton).
- The Navy in the Dardanelles Campaign (Wemyss).

4.—The Mesopotamia Campaign.

- The Campaign in Mesopotamia, 1914-18 (Evans).
- Official History of the Campaign in Mesopotamia, Vol. IV (F. J. Moberly).
- Critical Study of the Campaign in Mesopotamia up to April, 1917.
- Soldiers and Statesmen (Field-Marshal Sir W. Robertson).
- The World Crisis (Winston Churchill).
- Notes and Lectures on the Campaign in Mesopotamia (A. Kearsey).

5.—Waterloo Campaign.

- Waterloo Campaign (J. H. Anderson).
- Waterloo (Hilaire Belloc).
- Wellington and Waterloo (Arthur Griffiths).
- Waterloo the Downfall of the first Napoleon (George Hooper).
- Campaign of 1815 (W. H. James).
- With Napoleon at Waterloo (E. B. Low).
- Campaign of 1815, Ligny: Quatre-Bras: Waterloo (W. O'Connor Morris).

Waterloo Campaign (S. C. Pratt).

Wellington and Waterloo (G. W. Redway).

Wellington Campaigns. Peninsula-Waterloo, 1808-1815, also Moore's.

Campaign of Corunna (C. W. Robinson).

6.—*Marlborough's Campaigns.*

History of the British Army, Vol. I (Hon. J. W. Fortescue).

Life of John Duke of Marlborough, Vols. I and II (Archibald Alison).

The Wars of Marlborough, 1702-1709 (Frank Taylor).

John Churchill Duke of Marlborough, Vols. I and II (Viscount Wolseley).

Marlborough and the Rise of the British Army (C. T. Atkinson).

A Short Life of Marlborough (H. J. & E. A. Edwards).

The Battle of Blenheim (Hilaire Belloc).

7.—*The American Civil War.*

Stonewall Jackson and the American Civil War (G. F. R. Henderson).

History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).

History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).

American Civil War (J. H. Anderson).

The 1st American Civil War, 1775-78 (Henry Belcher).

The American Civil War, 1861-64 (John Formby).

History of the American Civil War (J. W. Draper).

Fredericksburg and Chancellorsville (J. E. Gough).

Battles and Leaders of the Civil War (Johnson and Buel).

War of Secession, 1861-62 (G. W. Redway).

8.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

9.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

A Staff Officer's Scrapbook (Ian Hamilton).

German Official Account.

Lectures on the Strategy of the Russo-Japanese War (Bird).

Question on the Russo-Japanese War (Brunker).

Official Account: The Russo-Japanese War (Naval and Military),
3 Vols., published by Committee of Imperial Defence.

- Outline of the Russo-Japanese War (Ross).
- A Study of the Russo-Japanese War (Chasseur).
- My Experiences at Nan Shan and Port Arthur (Tretyakow).
- Outline History of the Russo-Japanese War, 1904, up to the Battle of Liao-Yang, with Questions and Answers (P. W.).
- A Short Account of the Russo-Japanese War ("Footslogger").
- An Account of the Battle of Liao-Yang (with questions and 10 maps for examination purposes) (Bird).

10.—*The Palestine Campaign.*

- The Official History of the Great War—Military Operations in Egypt and Palestine, Vol. I, and Maps (Lieut.-General Sir George MacMunn and Captain Cyril Falls).
- The Palestine Campaign (Colonel A. P. Wavell).
- An Outline of the Egyptian and Palestine Campaigns, 1914-18 (Major-General Sir M. G. E. Bowman-Manifold).
- Official History of Australia in the War, 1914-18, Vol. VII, Sinai and Palestine (H. S. Gullett).
- The Desert Campaign (W. T. Massey)

11.—*Organization of Army since 1868.*

A.—ORGANIZATION OF ARMY SINCE 1868.

- History of British Army, by Fortescue, Vols. I to XI.
- Outline of the Development of British Army, by Major-General Sir W. H. Anderson.
- Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

- The Annual Army Estimates of Effective and Non-Effective Services (H. M. Stationery Office).
- * Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1928.
- The Statesman's Year Book 1929.
- Army List.
- Articles in Newspapers and Magazines, viz., R. U. S. I. Journal.
- Army Quarterly Journal of the U. S. I. of India, etc.
- † Handbooks for the Indian Army—Sikhs, 1928.

* Particularly recommended by the C. I. G. S. for all officers to read.

† Not to be removed from the library.

12.—*Development and Constitution of the British Empire.***A.—THE BRITISH EMPIRE.**

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book 1929.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas 1917).

The British Empire Series. (XII Volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

A Short History of Politics (Jenks, 1900).

The English Constitution (Bagehot, 1909).

The Expansion of England (Sir J. Seely, 1883).

Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).

England in the Seven Years' War (Sir J. Corbett, 1907).

Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).

Forty-one Years in India (Lord Roberts).

History of the British Army (Sir John Fortescue).

General Survey of the History of India (Sir Verney Lovett).

Citizenship in India (Captain P. S. Cannon).

India in 1926-27 (J. Coatman).

India in 1927-28 (J. Coatman).

India (Nations of to-day Series). (Sir Verney Lovett).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominions in India (Sir A. O. Lyall, 1894).

A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).

The Nearer East (Hogarth, 1902).

- Modern Egypt (Cromer, 1908).
 Egypt and the Army (Elgood, 1924).
 The History of Canada (W. L. Grant).
 Nova Scotia (B. Wilson, 1911).
 Report on British North America (Sir C. P. Lucas).
 The Union of South Africa (R. H. Brand, 1909).
 Short History of Australia (E. Scot).
 History of the Australasian Colonies (Jenks, 1912).
 The English in the West Indies (J. A. Froude, 1888).
 The Lost Possessions of England (W. F. Lord, 1896).
 International Relations of the Chinese Empire (H. B. Mosse).
 (Kelly and Walsh, Shanghai).
 What's Wrong with China (Gilbert).
 Why China Sees Red (Putman-Weale).
 Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).

13.—*Military Geography.*

- Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).
 Imperial Military Geography (Capt. D. H. Cole, 1928).
 Introduction of Military Geography (Col. E. S. May).
 Imperial Defence (Col. E. S. May).
 Main Feature of the Japanese and other Pacific Problems.
 (Reprinted from *Morning Post*. Sifton Præd).
 Britain and the British Seas (H. J. Makinder, 1907).
 Military Geography (Macguire).
 Imperial Strategy (Repington).
 War and the Empire (H. Foster).
 Historical Geography of British Colonies (Dominions), 7 Vols.
 (Sir C. P. Lucas, 1906-17)—
 Vol. 1, Mediterranean.
 Vol. 2, West Indies.
 Vol. 3, West Africa.
 Vol. 4, South Africa.
 Vol. 5, Canada.
 Vol. 6, Australia.
 Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).
 Historical Geography of the British Empire (Hereford George).
 The Mastery of the Pacific (A. R. Colquhoun, 1902).
 Frontiers (C. B. Fawcett, 1918).

14.—*Foreign Armies.*

OFFICIAL.

- * Handbook of the United States Army, 1924.
- * Handbook of the Army of the Netherlands, 1922.
- * Handbook of the French Army, 1925.
- * Handbook of the Belgian Army, 1926.
- * Handbook of the Polish Army, 1927.
- * Handbook of the Army of the Kingdom of Serbs-Croats and Slovenes (Yugo-Slavia) 1927.
- * Handbook of the Czechoslovak Army, 1927.
- * Handbook of the Swiss Army, 1924.
- * Handbook of the German Army, 1928.

15.—*Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 750 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet black*. No washes or ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be Taken Away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is available. Price As. 8 plus postage As. 4.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

VIII.—

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Historical Record of the 101st .. Grenadiers.	1928.	Capt. A. Frankland.
(Presented by Messrs. Gale & Polden, Ltd. London.)		
2. History of the Suffolk Regiment.	1919-27. 28.	
(Presented by the Author.)		Lt.-Col. C. C. R. Murray.
3. The Official History of Australia in the War 1914, Vol. III.	1929.	O. E. W. Bean.
The A. I. F. in France 1916.		
(Presented by Messrs. Angus Robertson, Ltd., Sydney.)		
4. Linguistic Survey of India, Vol. I, 1928, Part II.		Sir G. A. Grierson.
(Presented by the Central Publication Branch, Calcutta.)		

BOOKS PURCHASED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Historical Illustrations to F. S. R. Vol. II (2nd edn).	1927.	Major H. G. Eady.
2. European Skyways ..	1927.	Thomas Lowell.
3. Rulers of the Indian Ocean ..	1927.	Admiral G. A. Ballard.
4. Afghanistan of the Afghans	1928.	Sardar Ikbal Ali Shah.
5. Military Law. (16th edn. ..	1928.	Lt.-Col. S. T. Banning.
6. The Dictionary of English History.	1928.	F. J. C. Hearnshaw.
7. The Murmansk Venture ..	1928.	Maj.-Gen. Sir C. Maynard.
8. Military Operations France & Belgium 1915, Vol. VI,	1928.	J. E. Edmonds.

9. Townsend of Chitral and Kut.. 1928. Erroll Sherson.
10. Notes on the Land and Air 1928. Official.
Forces of the British Overseas Dominions, Colonies, Protectorates and Mandated Territories.
11. Story of the North Sea 1928. G. F. Snowden Gamble.
Air Station.
12. India on Trial .. 1929. J. E. Woolacott.
13. The Life of General Dyer .. 1929. Ian Colvin.

BOOKS ON ORDER.

1. The Intimate Papers of Colonel House, Seymour.
Vols. III & VI.
2. The History of the 8th Division in the J. A. Boraston.
Great War.
3. Warriors Still at Ease .. Armstrong.
4. Historical & Military Essays .. Fortescue.
5. Who's Who 1929
6. The World Crisis—The Aftermath.. Winston S. Churchill.
7. Lord Haldane's Autobiography
8. Empire in the New Era .. Amery.
9. Campaign in Gallipoli .. Kannengisser Pasha.
10. Memorandum on Resignation, Morley.
August 1914.
11. History of European Diplomacy, Mowat.
1451.
12. Mussolini—My Autobiography
13. Memories and Reflections .. Oxford & Asquith.
14. Field Marshal—Earl Haig .. John Charteris.
15. Official History of the Great War, C. F. Aspinall
Gallipoli May 1915, Vol. I. Oglander.

IX.—Pamphlets.

The following may be obtained by V. P. P., plus postage, on application to the Secretary:—

- (a) British and Indian Road Space Tables (separately), As. 12 each.
- (b) Diagram showing New System of Maintenance in the Field at Home, As. 8.
- (c) Military Law Paper, Questions and Answers, As. 4. (As used at the A. H. Q. Staff College Course, 1926).

X.—Schemes.

The schemes in the Institution have been considerably increased and in order to simplify their issue they have been classified and numbered as follows :—

They can all be obtained by V. P. P., plus postage, on application to the Secretary.

(A) *Administrative Exercise, with diagram (Reprinted May, 1928).*

To illustrate the supply system of a Division (suitable for Staff College or Promotion) .. Rs. 2

(B) *Mountain Warfare (Reprinted May, 1928).*

(i) A scheme complete with map and solution .. ,, 2-8

(ii) Three Lectures on Mountain Warfare .. ,, 1-8

(C) *New Staff College Series (Reprinted May, 1928).* Complete with maps and solutions :—

(i) Approach March.

Reconnaissance of night attack.

Orders for night attack Rs. 2-8

(ii) Outposts.

Defence.

Action of a Force Retiring ,, 2-8

(iii) Move by M. T.

Occupation of a defensive position.

Counter-attack ,, 2-8

(D) *Promotion Series (Reprinted May, 1928).* Complete with maps and solutions.

Lieutenant to Captain—

(i) Mountain Warfare Rs. 2-8

(ii) Defence.

Attack orders ,, 2-8

Captain to Major—

(i) Outposts.

Defensive position.

Withdrawal ,, 2-8

(ii) Tactical Exercise without troops.

Reconnaissance.

Attack orders ,, 2-8

(E) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War." As. 12.

(F) Copies of the recent (February 1928) Staff College Examination papers are available :—

Strategy and Tactics Papers with Maps .. Rs. 2 each.
Other papers ,, 1 ,,

(G) *Staff College Course Schemes (1928) :—*

- (i) A set of three schemes, as given at the Army Headquarter Staff College Course, 1928, complete with maps and solutions, complete set .. Rs. 5

A limited number of the following papers are available :—

- | | | |
|---|-------|-------------|
| (ii) Supply Problem (with map and answers) | .. | Rs. 2 each. |
| (iii) Organization and Administration—Peace (with notes for replies) | .. .. | As. 8 " |
| (iv) Precis of lecture on Organization and Administration | .. .. | " 8 " |
| (v) Hints on Working for the Examination and on tackling the Tactical Papers | .. .. | " 8 " |
| (vi) Lecture on Military Law III—Precis | .. .. | " 8 " |
| (vii) Precis of Lecture on Night Operations | .. .. | " 8 " |
| (viii) Precis of Lecture on Bush Warfare | .. .. | " 4 " |
| (ix) Precis of Lecture on East Prussian Campaign, 1914—(I.—Battle of Tannenberg) | .. .. | " 8 " |
| (x) Precis of Lecture on East Prussian Campaign, 1914—(II.—The Battle of the Masurian Lakes; and General Lessons) | .. .. | " 8 " |
| (xi) Lecture on R. A. F. Organization and General Employment | .. .. | " 8 " |
| (xii) Lecture on R. A. F. Co-operation with the Army | .. .. | " 8 " |
| (xiii) Precis of Lecture on the Employment of Cavalry with a Brigade of all Arms | .. .. | " 8 " |
| (xiv) Precis of Two Lectures on the Organization of the British Army | .. .. | " 8 " |
| (xv) Precis of Lecture on Ordnance Services with Special Reference to Movement on Transportation | .. .. | " 8 " |
| (xvi) Precis of Lecture on the Dominion Forces | .. .. | " 8 " |
| (xvii) Precis of Lecture on the Armoured Force | .. .. | " 8 " |
| (xviii) Precis of Lecture on the Auxiliary and Indian Territorial Forces | .. .. | " 8 " |
| (xix) Precis of Lecture on the Artillery Organization | .. .. | " 8 " |

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

Prize Essay Gold Medallists.

(With Rank of Officers at the date of the Essay).

- 1872..ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
 1873..COLQUHOUN, Capt. J. S., R.A.
 1874..COLQUHOUN, Capt. J. S., R.A.
 1879..ST. JOHN, Maj., O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., s.c.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry.
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cavy. Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
 1899..NEVILLE, Col. J. P. C., s.c.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905..COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., R.A.
 1909..MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
 1911..Mr. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q.V.O. Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., M.C., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923..KEEN, Colonel F. S., D.S.O., I.A.
 1926..DENNYS, Major L. E., M.C., 4/12th Frontier Force Regiment
 1927..HOGG, Major D. Mc. A., M.C., R.E.
 1928..FRANKS, Major K. F., D.S.O., 5th Royal Mahrattas.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For specially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for special good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* *N. B.*—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Major H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (especially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894..O'SULLIVAN, Major G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909..MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(concl'd.).

- 1910..SYKES, Maj. M., c.m.g., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHEER JUNG, Survey of India.
- 1911..LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..PRITCHARD, Capt. P. P. A., 83rd Wallahjabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., c.m.g., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917..MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918..NOEL, Capt. E. W. C. (Political Department).
- 1919..KEELING, Lt.-Col. E. H., m.c., R.E.
ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920..BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..HOLT, Major A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..ABDUL SAMAD SHAH, Capt., o.b.e., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department.
- 1924..HAVILDAR RAHMAT SHAH, N.-W. F. Corps.
NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..SPEAR, Captain C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..HARVEY-KELLY, Major C. H. G. H., d.s.o., 4/10th Baluch Regiment.
- 1927..LAKE, Major M. C., 4/4th Bombay Grenadiers.
- 1928..BOWERMAN, CAPTAIN J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMED KHAN, Havildar, Zhob Levy Corps.
- 1929..ABDUL HANAN, Naik, N.-W. F. Intelligence Corps. (With gratuity of Rs. 100.)
GHULAM ALI, Daffadar, Guides Cavalry.

The Journal

OF THE

United Service Institution of India.

Vol. LIX.

JULY, 1929.

No. 256.

EDITORIAL.

Periodical stock-taking is an essential feature of every business organization. It assists the directors in arriving at an accurate estimate of the present position, and aids them in formulating their future policy. Even the individual, be he prudent, should pause from time to time, and "even up his accounts" as did the immortal Samuel Pepys.

As with business organizations and with individuals so with nations; for what is a nation but a business on a greatly magnified scale?

The annual Budget provides a nation with the opportunity to a certain extent for stock-taking, but the party in power is so intent on presenting the best possible aspect, and the opposition so keen on finding flaws, legitimate or otherwise, that in the mass of verbiage it is by no means easy for the private individual to discover how matters really stand.

Rather than the Budget, with its attendant distractions however, we should look to centenaries and other anniversaries as our means for taking stock. Such an opportunity was afforded on April 1st of this year, for on that day the Territorial Force, or Army as it is now called, came of age.

Looking back during this relatively short period of 21 years it is amazing to reflect on the opposition which greeted Mr. Haldane's proposals. To-day it is freely and frankly acknowledged how much we owe to his prevision. His text was essentially "Preparedness for War." What better text is there for any soldier of whatever rank? We live in a pacifist age it is true, but, looking back through the ages, from Julius Cæsar to Lord Roberts, the cry is always the same—"If you want peace, prepare for war."

Of the supreme value of the Territorial organization during the War there can be no doubt.

Right nobly did they fill the gap until the New Armies were trained to take the field. Their services were world-wide, and to them is now entrusted the honour and responsibility of being the basis of expansion of our national forces for the defence of the Empire. How many of us fully realize this fact? Gone are the days when Punch poked good humoured fun at our "Saturday afternoon soldiers." They have indeed been proved and not found wanting. It is therefore the bounden duty of every regular soldier, and indeed of every citizen of our Empire, to do all in his power to assist the Territorial movement, for on it our very existence depends.

We, in India, have little opportunity of judging of the self sacrifice and patience under difficulties which the Territorial soldier has to face. To those of us who have had this privilege it is an education, and these notes are written with the object of bringing home to each one of us the debt we owe to Mr. Haldane and to the men who followed his lead.

* * * * *

In its more sheltered sphere of life, the United Service Institution of India has recently had its annual stock-taking. As the result it has been decided to introduce certain changes with the intention of giving as much assistance as possible to its members. In future all books from the library will be despatched postage paid, and the cost of all schemes has been reduced by approximately 50 per cent.

The Secretary would be very pleased to have suggestions by which further benefits could be conferred on members. One of the main objects of the Institute is to serve its members to the best of its ability. The extent of such service depends very largely on funds being available.

The number of members continues to show a steady increase, but there are undoubtedly still many officers who might be members but are not.

* * * * *

When writing of the Territorial Army it is but natural that the idea of patriotism leaps to the mind, and one wonders what effect the League of Nations will have on this patriotism. It cannot be

denied that a love for his country, and a readiness, if need arises, to sacrifice life itself in its defence, is one of the noblest traits in man's character. From the very beginning of the history of nations this is an ideal that has been fostered throughout all lands. It is one of the main pillars on which the superstructure of character building is based.

One of the chief objects of the League of Nations is the elimination of war. It seems, therefore, that if the League succeeds in attaining this object, patriotism, as we know it, will tend to disappear. Is there anything that can really take its place? The mind gropes for possible substitutes, and, looming in the dim distance, though still obscure, the twin thoughts of "brotherhood" and "love of humanity" appear.

Patriotism, it is true, is an abstract notion, but it is based on something that is definitely concrete—one's native land. Can the same be said of "brotherhood" and "love of humanity"? To us, ordinary mortals, such feelings savour essentially of abstract ideals, in theory eminently desirable, in practice, alas, a pious hope. The world to-day is not the Utopia as pictured by Sir Thomas More four hundred years ago. Yet we believe that if patriotism is to disappear, it is essential that some ideal of an equally inspiring nature should take its place.

The above notes may appear to some to be out of place in a journal written for the Services. Yet there is no reason why a sailor, a soldier, or an airman should not be a human being. In fact there is every reason why he should be. We are all, no matter what our calling, searching for an ideal. It is an almost accepted principle that the Services are cynical critics of the League of Nations.

This we maintain, is hardly fair. We believe in ideals just as much as does any civilian, but, in virtue of our calling, we feel that while sympathising with the work and ideals of the League, our first duty is "to keep our powder dry." This is our profession of faith.

* * * * *

The word "mechanization" can seldom be omitted in any discussion on military affairs. It is interwoven inextricably with almost every military project. While it is a subject of absorbing importance for the student of military affairs, its study presents for him certain disturbing features.

Owing to the advent of mechanization it would appear that those blessed words "final decision" as applied to most military problems must inevitably disappear. In this age of scientific development the decision which is final to-day may well have to be re-cast to-morrow. To this there is no remedy if we are to keep up-to-date.

In order to understand the difficulties with which our student is confronted let us trace for one moment a possible sequence of events. Let us suppose, for example, that some ingenious mechanical brain has invented a lorry surpassing in performance anything which has previously been known. The first stage is concerned with a series of tests and trials by a committee of experts, who, we will suppose, accept the lorry as one of super-excellence, and as eminently suitable for military use. This may be called the theoretical stage, and from this we pass to one that we may name the "practical." Here finance is paramount. The adoption of the lorry may be desirable, and even essential from the military point of view, but the deciding factor must be whether funds are available.

Let us imagine that all goes well with our super-lorry. The obstacles in its path are smoothed away. It is accepted and passed for production and issue. Its introduction will almost certainly cause changes in organization, administration and tactics.

Our student is confronted with these changes, themselves the fruits of months of unremitting labour. All his pre-conceived ideas of time and space, which enter into military calculations of every description are completely revolutionized. He has to start all over again. This is the time at which he will desire fervently to be back in the bow and arrow age, and at which, to him, the word "mechanization" will be anathema. And more than this. Lurking in the back of his mind, there will always be the thought that some maniacal mind is conceiving a mechanically propelled vehicle which will reduce the value of his super-lorry to that of a wheel barrow.

The picture we have attempted to paint is, for our student, a dark one, but we claim that it is by no means fantastic. There remains the moral.

The pleasing legend, learnt in our childhood days, of the Sleeping Beauty cannot be applicable to modern conditions. The officer of to-day cannot afford to live in the past. He is not even pulling his weight if he exists in the present. His goal is the future and all it

holds. His lot is a difficult one, but, more and more is it becoming obvious that he must possess an "open and flexible mind."

In a recent publication from the War Office the above attributes are laid down as one of the first qualifications of an officer. No truer words were ever penned. From them our student, faced with examinations, will receive small comfort, but they do most clearly summarize the situation. An officer to-day has to think and keep on thinking. There is no finality. If his brain ceases to function he is useless as an officer.

THE SACK OF SERINGAPATAM
AND
THE DEATH OF TIPPOO SULTAN

By

LIEUTENANT-COLONEL C. C. R. MURPHY.

Windsor Castle, with all its irreplaceable treasures in the shape of pictures, tapestries, furniture, armour and the like, contains so much of interest that perforce many objects of great historical value lie there almost unheeded. Amongst these treasures, collected from our own land and from the farthest-flung limits of our Empire, reminiscent of famous men and places and speaking eloquently of history to the understanding mind, may certainly be reckoned a life-size tiger's head in gold and a quaint little jewelled peacock. These, while adorning the throne of Tippoo Sultan, King of Mysore, were captured at the storming of Seringapatam in 1799. A tiger, be it noted, was the special badge of Tippoo's dynasty, a peacock being a favourite ornament common to many Indian thrones. These tokens of a sovereignty that is forgotten and a splendour that has vanished, these relics of the stern days when our Indian Empire was in the making, formed part of the immense booty which fell into our hands on that inspiring occasion. In the operations of war chance plays a leading, often a determining part; yet memorable as the siege was, and vital as were its issues, the series of remarkable coincidences besetting it almost rival its brilliance as an exploit.

Seringapatam is a name bringing to the memory the vision of a breach in lofty walls and a spirited dash across a rocky river bed; an eastern palace of fabulous wealth where, like the robbers' cave of the Arabian Nights, gold and precious stones lay about in great heaps; an infidel stronghold in whose bat-haunted dungeons Englishmen were tortured to death; and overshadowing all, the scarlet figure of Tippoo Sultan, the well-execrated subject of this memoir.

Fanatical and bigoted to a degree, Tippoo was the son of Hyder Ali, the great Muhammadan soldier-adventurer who, having wrested the throne of Mysore from its ancient Hindu dynasty, became the most formidable opponent the British ever encountered in India. The son inherited from his illiterate father a deep-seated hatred of the English. He retained regularly in his service a large number of French officers and men and from his island citadel at Seringapatam

and kept himself in close and sympathetic touch with the Indian designs of the French Directory. Situated in the Cauvery river in Mysore, the fortress occupied the western end of the island, its northern and western faces being covered by the river. Due east of the fortress on the water's edge stands the Daulat Bagh, the summer palace of Tippoo Sultan, still retaining traces of its former glories of gilt and colour. The island is said to be haunted; certainly the writer's experience did not tend to upset the belief, for after spending three days there in writing this account, the manuscript was lost in the post and the writer contracted small pox.

The first siege of Seringapatam, which took place in 1792, has paled in significance before the famous achievement of 1799, and is noteworthy chiefly because the British forces were led by the Governor-General, Lord Cornwallis, in person, with a pomp and magnificence of supply which, as Sir William Hunter says, recalled the campaigns of Aurangzeb. On that occasion Tippoo, finding his capital being rapidly invested, submitted to Lord Cornwallis; he agreed to pay the vast sum of thirty-three million rupees and to cede about half his territories. With a heart eaten by chagrin and a mind bent on future resistance, he immediately applied himself to the task of refilling his coffers and strengthening his fortress. With the help of his French engineers, new lines of entrenchments were made and a second rampart and ditch constructed on all faces a short distance within the outer walls, a fact which might have been fraught with the direst consequences to the British attack had not the long arm of coincidence come to its aid in a manner presently described.

In the year 1798, it was brought to the notice of the Earl of Mornington,* on assuming office as Governor-General of India, that Tippoo was intriguing with the French, an important letter, written by Napoleon from Egypt and addressed to Tippoo, having been fortuituously intercepted by the British. Tippoo was promptly called upon to give a surety for his peaceable behaviour, but his reply being unsatisfactory and a French invasion greatly feared at that time, troops were set in motion against him. After several collisions with the Mysore forces, including the battle of Mallavelly on March 27th, 1799, the British army under General (afterwards Lord) Harris arrived within four miles of Seringapatam. A quaint coloured print of this successful action at Mallavelly (Colonel Arthur

* Afterwards Marquess Wellesley; brother of Colonel Arthur Wellesley.

Wellesley's* first battle in India) was afterwards published. Early in April, after severe fighting, a further advance was made, and in the course of a night attack twelve British soldiers were taken prisoners. These were all put to death, some by having their necks twisted until broken, and others by having nails hammered into their skulls. However, terrible retribution was at hand.

Following this incident came a month of fighting and hardships, the British force gradually closing in on Seringapatam. Day by day the parallels drew nearer until one night two British subalterns, with outstanding bravery, reconnoitred the ford, marked it by means of sticks, and reported the breach near the north-west angle practicable. Orders for the attack were immediately issued, and before daylight on May 4th the storm troops were all concealed in their assembly positions.

It was ten minutes past one o'clock in the afternoon, when General Baird, having completed all his arrangements for his heroic enterprise, stepped out of the trenches and drawing his sword exclaimed to the men, in the most gallant and animating manner, 'Now my brave fellows, follow me, and prove yourself worthy of the name of British soldiers.' In an instant the assaulting columns sprang up and, dashing into the river, crossed it under a fire which at every step grew heavier. The enemy had, however, been taken unawares, and within a few minutes the heads of the assaulting columns had gained the breach and hoisted a red jacket as a flag on the ramparts. But suddenly, to their dismay, the British found themselves confronted by a formidable inner rampart, lined with Tippoo's *ghazis*, and separated from them by a rock-hewn ditch sixty feet deep. Here it was that General Baird was heard to exclaim 'Good God! I did not expect this!'

His men, thus checked at a most critical moment, were miraculously saved by the fortune of war; for, charging right and left in search of a means of surmounting this obstacle, they discovered a plank just long enough to span the ditch. Miraculous plank indeed, whose presence may have altered the writing of history. This was hurriedly placed in position, and over the flimsy, makeshift bridge the attackers rushed in single file, under the covering fire of their comrades, into the inner fort. It is related that in the cold blood of the following morning not a single man would venture to cross it. A few of Baird's

* Afterwards Duke of Wellington.

stalwarts even succeeded in descending the precipitous counterscarp and climbing up the other side.

Tippoo was still at his mid-day meal when the assault began. Dressed in a light-coloured jacket, wide trousers of fine flowered chintz, a sash of dark red silk, a glittering ornament in his turban, and a talisman on his right arm, with his sword in a rich belt over his right shoulder and a cartridge box hung to another embroidered belt over his left shoulder, he strode forth along the ramparts and fired several shots at the stormers as they scrambled through the breach. Having received a slight wound he retraced his steps, making for the open space in front of the sally-port where his horse was waiting for him. From here the way was open for him to join his cavalry across the river and escape; but this he disdained to do. Thinking that the inner fort was still secure, and that from its ramparts he might yet be able to drive back the unbelievers, he mounted his horse and endeavoured to gain access thereto, but on reaching the gateway found it choked to the top of the archway with dead and dying. Here pierced by wounds, his horse sank under him, his turban fell off and he received another wound, severe but not fatal. His attendants then lifted him into a palanquin, but as it was impossible in the crowd to move this clumsy conveyance, he appears to have quitted it and crawled away. Covered with blood and dying now, the fallen Sultan was again raised by a faithful few and put back into his palanquin where he lay, faint and exhausted, until some of the attackers reached him. It is said that one of the soldiers, seizing Tippoo's costly swordbelt attempted to drag it off, and that Tippoo, who still grasped his curved scimitar, made a last cut with it wounding his assailant who thereupon shot Tippoo through the head, killing him on the spot. Thus perished a man whose barbarous conduct towards his prisoners had placed him beyond the pale of quarter. His body remained undiscovered for several hours.

The fortress now became one wild scene of plunder and confusion. The treasury, which contained immense riches, was broken into and ransacked, the houses of the nobles, bankers and merchants, all suffering a similar fate. Hundreds of guns, great pyramids of gunpowder and shot, together with gold and jewels to the value of many million sterling, were captured, to say nothing of the loot that fell into the hands of the troops themselves, for scarcely a house on the island was left unplundered. The soldiers filled their pockets,

caps, and even their muskets, with zechins*, pagodas, rupees and gold ingots; and the Duke of Wellington relates that after the battle, jewels of the greatest value, bars of gold and the like, were offered for sale in the camp.

Perhaps the most interesting coincidence connected with the siege of Seringapatam is that the storming party was led by General David Baird who, captured by Hyder Ali after the ill-starred battle of Perambaukam, had himself been a prisoner within its walls for more than three years. It is on record that when General Baird's mother was told that her son was a prisoner with Tippoo Sultan, and that the prisoners were chained together in pairs, she exclaimed 'The Lord have mercy on the man who is chained to our Davie.' This distinguished soldier, who was subsequently created a baronet, had a remarkable career. After a series of almost incredible adventures in India, he served as Commander-in-Chief at the capture of the Cape of Good Hope, and at the battle of Corunna lost an arm.

Another notable circumstance attending this siege is that the attack, instead of taking place in the cool of the early morning, was not delivered until about one o'clock, that is to say when the heat is almost unbearable. The enemy, unsuspectingly engaged in the culinary preparations usual at that hour, were taken completely by surprise. They never dreamed that the Feringhees (foreigners) would venture out in the blazing sun during the hottest season of the year. To commemorate this fact the sun in full splendour is depicted on the medal struck in honour of the siege. This medal shows the Indian Tiger being trampled on by the British Lion, and bears in Arabic the somewhat ironical inscription *Asadullah il Ghalib*, the conquering lion of God. It was given in gold to generals, in silver to captains, and in copper (and even tin) to privates; distinctions ludicrously reminiscent of an Indian railway, where a passenger is a lady, a woman, or a female according to the class of her ticket.

Whatever his life may have been, Tippoo Sultan certainly met a soldier's death, and some of the victorious troops were detailed to attend the funeral. But those mysterious influences, so often at work during the siege, seem to have prevailed to the end, and the obsequies themselves were performed under circumstances so uncanny that the

* These zechins and pagodas were small gold coins, worth rather more than nine and seven shillings respectively.

following graphic account by an eye-witness is quoted at length :—
‘ About five o’clock in the evening, a darkness of unusual obscurity came on, huge volumes of clouds hanging within a few feet of the earth in a motionless state. Suddenly there came a rushing wind of irresistible force, accompanied by torrential rain. The thunder cracked in appalling peals close to our ears, and the vivid lightning tore up the ground in long ridges all round. The flashes of lightning were not as usual from far distant clouds, but proceeded from heavy vapours within a few yards of the earth. Such a scene of desolation can hardly be imagined. Every hospital tent was blown away, leaving the wounded exposed, unsheltered to the elemental strife. In one of these alone, eighteen men who had suffered amputation were all found dead on the spot the following morning. The funeral party escorting Tippoo’s body to the mausoleum of his ancestors, situated in the Lal Bagh garden, where the remains of his warlike father, Hyder Ali, had been deposited, were overtaken at the commencement of this furious whirlwind, and the soldiers ever after were impressed with the firm persuasion that His Satanic Majesty attended in person at the funeral procession. Never shall I forget that dreadful night to the last day of my existence. All language is inadequate to describe it. Rather than be exposed to such another scene I would prefer the front of a hundred battles.’*

At the time of the capture of Seringapatam only two days’ rations remained for the sustenance of the British force. Immediately afterwards the river, swollen by the deluge of rain, became unfordable. If therefore this storm had burst just before zero day, instead of just after, General Harris would have been compelled to raise the siege and withdraw his army. But the downfall of Tippoo had been decreed, and the moving finger, having writ, moved on. Every soldier in the army believed that the vicious character of this storm, by which so many lives were lost, was attributable to some unseen diabolical agency which had apparently chosen this way of celebrating such a valuable addition to the Kingdom of Darkness.

* The Diary of Colonel Bayly (Army and Navy Co-op. Soc., Ltd., 1896.)

THE NEW INFANTRY ORGANIZATION.

By

BRIGADIER L. F. RENNY, C.M.G., D.S.O.

The new infantry organization will shortly be brought into force in the Army in India and many officers are asking themselves the question—"What will be the effect of this new organization on the tactical handling of infantry and machine guns"?

Although this organization has been in force for some time past at Home, we have so far received little light and guidance on the subject.

The following ideas are put forward solely as a basis for thought and discussion.

The new organization does not in any way alter the general principles of M. G. tactical handling as already laid down in our manuals.

Disposition in depth, both in attack and defence : movement by bounds from one *fire* position to another : movement of M. G's. not necessarily synchronising with that of the infantry they are supporting : value of oblique fire in defence : co-operation between artillery and machine guns : &c., &c., all hold good.

The introduction of the M. G. company of 16 guns at Home allows of the application, in full measure, of the principle of three echelons of M. G's. in the attack, *viz* : forward, supporting and reserve guns. At Home at least two sections can, if desired, be allotted to each of these echelons, *i.e.*, each echelon can have two fire units in itself capable of "leap-frogging" through each other. That is to say each echelon is capable of movement in depth.

It must, however, be recognised that in the Army in India at present, if all three echelons are to be employed, each echelon can consist of one section only=2 guns.

In this connection I am assuming that the "draught" M. G. platoon of a British battalion will normally be taken as a brigade reserve.

One thing is certain. The frontage of a battalion (800^x to 1500^x according to circumstances) will not be decreased either in attack or defence on account of the new organization. After all, it is not necessary for a battalion commander to cover with *men* the whole of the frontage allotted to him. What he wants to ensure is that his frontage can be covered with *fire*, either small arm or artillery or preferably both.

Under the old four rifle company organization there has been a tendency always to have two forward companies and two companies in reserve. In fact this disposition has become stereotyped, to the ignoring of ground and other factors.

Now that one of the rifle companies is to disappear, C. O.'s. are asking themselves—" Shall I have only one forward company and two in reserve, or shall I have two forward companies and only one in reserve " ? " How am I to employ my M. G. company to make up for the deficiency of a rifle company " ?

C. O.'s. do not like the idea of having only one rifle company in reserve.

The answer to the above questions appears to me to be contained in two words—DEPTH and GROUND.

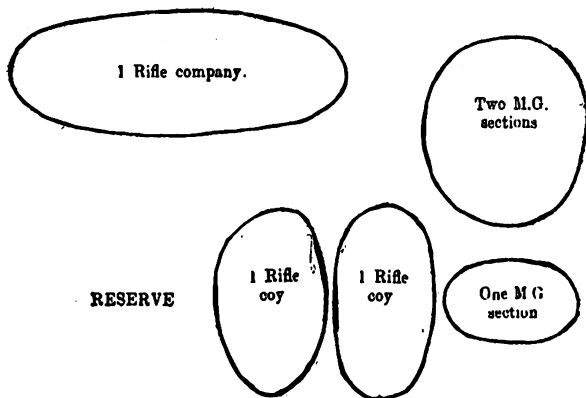
In spite of the loss of a rifle company the battalion commander must maintain considerable depth in his dispositions. The disposition of his rifle companies and M. G. company will in nearly every case be dictated by the ground.

To consider the attack.

I can conceive cases where the battalion commander will have only one forward rifle company, perhaps in the initial stage of an attack.

Obviously one company cannot be spread out over the whole battalion frontage : it would be quite out of control. Therefore the C. O. will have one rifle company covering part of the frontage and in the other portion of his front will utilize some of his M. G.'s. to assist that company forward. For this purpose the C. O. must allot two M. G. sections in order that there may be movement in depth.

Figure 1.

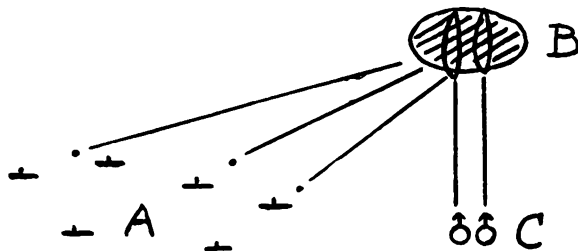


If it is a flank battalion (or the battalion is operating singly) then it may be necessary for the C. O. to push up one or two infantry platoons from his reserve to operate with the forward M. G's.; particularly in regard to watching their exposed flank. The question as to whether the forward rifle company will be on the left and the M. G's. on the right, or *vice versa*, will depend entirely on the ground. Obviously the M. G's. should be allotted that portion of the frontage which affords them the best chance of working forward. It must be remembered that there is a distinct advantage in not having much infantry operating in the immediate area in which the M. G's. are moving, in that difficulties in regard to overhead fire are thereby removed.

To a certain extent the M. G's. may be able to assist the forward rifle company to get forward by means of oblique fire. But the limitations of such oblique fire must be borne in mind : sooner or later it becomes masked by the advancing troops.

The manner in which the M. G's. are more likely to be able to assist the rifle company is by subduing the fire of a hostile locality which is holding up the advance by fire *from a flank*. Thus in Figure 2. The company has reached the area A but has been held up by fire from locality B. M. G.'s are brought up to C to subdue the fire from B.

Figure 2.



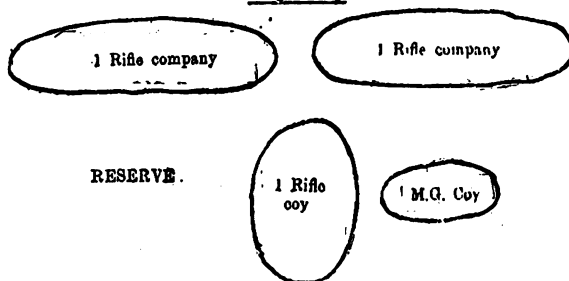
Lately there has been much written and said as to the difficulty of getting M. G's. forward in the attack. We are all waiting to hear what results can be obtained by an "armoured M. G. carrier." It would be unwise to attempt to forecast its performance too definitely : nothing but trial in actual warfare can decide.

But this much may, I think, be said. The "armoured carrier" will, no doubt, save some casualties in getting over ground. It will, probably, be more difficult for the "driver" to take full advantage of covered approaches than in the case of limbers or pack. Surprise may therefore be sacrificed. But the main point is that when the guns are to come into action, the gunners must quit their armour protection and are then in exactly the same state as regards hostile fire as if the guns had been brought up to the gun position in limbers or on pack.

It must, however, be remembered that in the last stages of the Great War in France, where the terrain afforded some covered approaches, our machine guns advanced boldly in their limbers, sometimes to within 500^x of the enemy. There were casualties in horses; but these casualties were worth while.

If the ground over which the attack *must* advance is dead flat and open then it seems useless to attempt to push machine guns right forward whatever be their means of transport, unless, of course, they are in tanks, which is quite another matter. In such case the infantry must fight their way forward supported by artillery and possibly light tanks (not to be confused with the M. G. "carrier") keeping the M. G.'s. in hand for a further phase of the battle on ground more favourable to them. Under these circumstances I can conceive the battalion commander having two forward rifle companies, keeping one rifle company and the whole M. G. company in reserve for the time being.

Figure 3.



To turn to the defence.

Again, the problem seems to be—one forward rifle company and two in reserve, or two forward rifle companies and one in reserve?

In my opinion there is little doubt as to which will be, normally, the best solution. One rifle company cannot be spread out over the whole battalion frontage. The M. G's. cannot hold a large portion of the front entirely by themselves. If the ground is very favourable they may be able to do so in daylight. But at night, in smoke, fog, &c., they must have some infantry posts with them to prevent infiltration. Therefore, in defence, I think there must be two forward rifle companies each in considerable depth, with the M. G. Coy. (also in depth) disposed to the best advantage over the battalion front, leaving one rifle company in reserve.

The additional M. G's. provided at Home under the new organization enable the two forward companies to be in much greater depth than they could be under the old organization. This can hardly be said to be the case in the Army in India, since there is at present an increase of two machine guns only in the battalion.

Although they do not bear solely on the subject of the new organization, I submit, in conclusion, the following points regarding M. G. tactical handling, points which have been brought to my notice by incidents seen and discussions heard during recent training. There has been a tendency of late to cry down the efficacy of overhead fire. I think this is a pity. Everyone knows that on dead flat ground, in the attack, overhead fire cannot be applied effectively. But if the ground is in any way favourable (and it frequently is!) overhead fire by M. G's. may be of infinite value. If we keep on saying it is of no use, our machine gunners will not be encouraged to train themselves for it, and they will lose the high technical ability which is so essential in war. The same remarks apply to the use of indirect fire, which, however seldom it may be applicable in the attack, will frequently be required in defence. Lastly, disposition in depth is essential. At Home the battalion commander, with the large number of M. G's. he has available, can afford himself the luxury of disposing some of his M. G's. on both flanks of his battalion and still maintain depth in his M. G. dispositions. But the battalion commander in India has only one platoon of 3 sections to play with. His M. G. reserves are still very limited and he must resist firmly the temptation to scatter them

laterally, at any rate in the attack. With such limited resources at his disposal the battalion commander must decide which is the most important of the several rôles which might be allotted to his machine guns, and then utilise them *in depth* to carry out that rôle.

There will usually be reasons of ground which will determine his choice.

THE EVACUATION OF GALLIPOLI

By

BREVET LIEUT.-COLONEL H. E. CROCKER, C.M.G., D.S.O.

The following accounts of the evacuations of the Gallipoli Peninsula, both at Suvla and Cape Helles, are related by an officer of the XIII Signal Company, XIII Division, who was present at both evacuations. They are told, therefore, principally from the signal point of view.

I.—SUVLA.

Early in December 1915, rumours of an impending evacuation filled the air, and preliminary preparations were made accordingly. Our division, the XIII, commanded by General Maude, was at that time at Suvla Bay, with all three brigades in the front line. Our right rested on Chocolate Hill, and our left joined on to the right of the XXIX Division. Divisional headquarters were in dug-outs on the edge of a high cliff close to Lala Baba Hill, on which an advanced battle report centre had been prepared.

Just below divisional headquarters there was a narrow strip of beach, and here an Australian Engineer Corps had constructed a landing stage.

The preliminary arrangements for the evacuation consisted in sending away every man that could be spared, together with all heavy instruments, surplus cable, etc., in short everything that could not be carried by hand. Buzzers were replaced by D III telephones. The cables, which had been hitched on to larch poles to the brigades, were "laddered" at frequent intervals, in order to minimise the chance of a complete breakdown at a critical moment, and several additional cables were laid as a further precaution.

By Zero-1 day, our strength had been so much reduced, that it was all we could do to cope with the signal traffic. Line patrolling had to be reduced considerably.

On the afternoon of Z-1 day, the Turks, for some reason or other, commenced to shell the landing stage below our divisional headquarters. The second or third shell scored a direct hit, and demolished one section of the landing stage. It was, however, repaired the same night. From the fact that they shelled the pier, we considered that

the Turks had heard of our impending evacuation, especially as by now, many additional transports had arrived. Apparently such was not the case, and their gunners must have shelled the pier for want of something better to do.

We heard afterwards that, to the Turks, the arrival of these additional transports presaged the arrival of reinforcements and a further "push," and that they started strengthening their positions with renewed vigour.

The preparations made for the evacuation were as follows:—

The garrisons of the front line trenches were to be reduced gradually by successive "waves." As each wave left the trenches, it was to occupy one of the positions dug astride the road on the way back to Suvla Bay. These positions were dug with the object of checking pursuit, should the Turks discover our withdrawal, and follow up on the heels of the "waves." All these intermediate trenches were connected by telephone with divisional headquarters. The final waves to leave the trenches would go straight through, and embark on the motor lighters which would convey them to the waiting transports. Finally, there would be only one man left in each hundred yards of trench.

At last, after what seemed like an eternity of waiting, the eventful night arrived. According to the almanac, there ought to be a full moon, but the staff were taking no chances. Every precaution that prudence and experience could suggest was taken to assist the troops in finding their way. Long trails of flour were laid. Lanterns, consisting of kerosine tins containing lamps, with one side cut away and covered with red paper were placed at intervals, with the light shining along the path to be followed. Notice-boards and signposts were erected close to the lanterns. Guides, who really knew the way, were told off. There only remained the weather to be considered. That, too, had been all we could desire up to date, and there seemed to be no reason why it should not continue to favour our enterprise.

Zero hour. Within a few minutes a message came through to say that the first wave had left the trenches, and that all was quiet. The full moon was shining gloriously, lighting up the country-side, and showing the path clearly in front of the hurrying waves as they made their way through the country south of the Salt Lake; in many places thickly overgrown with short bushy scrub. Shortly afterwards this

first wave reported their arrival in the advanced intermediate trench. Then, punctual to a minute, the second wave got under way, and then the third, each wave occupying the intermediate trenches to which they had been detailed. Finally, only the die-hards were left, and after a few minutes, we heard, with a sigh of relief, that they had reached the advanced intermediate trench, and that all was well. The entire line of trenches had been evacuated according to plan, without the Turks making any sign that they had discovered anything unusua...

Several factors contributed to this ignorance on their part:—

- (a) They were not expecting an evacuation.
- (b) Their patrols were slack and inefficient.
- (c) Our last men in the trenches kept up a desultory fire from various parts of the line, and even after they had left, rifles, their triggers connected to weights, continued to fire at intervals.

The rear waves had by now passed through the intermediate trenches, and were approaching the cliff. They were at once taken in charge by the guides, and conducted down the steep path to the beach and on board their lighters. The full moon was now riding high in the heavens, lighting up the beach, and doing her best to assist with the proceedings.

Continuous reports came in from the front that all was quiet. So still was the night that we could hear distinctly the occasional shots from the trenches. The different waves followed each other in perfect order, and filed on board the lighters. There was no hurry or confusion, all arrangements worked calmly and easily.

At length the garrisons of the advanced posts commenced to withdraw, and e'er long, marching in to headquarters, they filed down the cliff and embarked. Still no signs from the Turks, and we now permitted ourselves to think that the fates would be kind, and make up in some degree for our ill-success during the campaign.

The garrison of each intermediate post withdrew in its turn until they were all in. The troops detailed to hold the covering position at divisional headquarters were now withdrawn and embarked.

We hastily rang up corps headquarters and reported that our embarkation was completed. Disconnecting the telephone, we snatched them up, and fled down the path to the lighter.

It was heart-breaking to have to abandon all those miles of good D5 cable, but it could not be helped. It is interesting to note that the D5 cable, laid through the sea across the bay to corps headquarters, was working well up to the last minute, and speech was plainly audible.

We sailed away for Mudros, where we found our Christmas mail waiting for us, and had a cheery Christmas dinner on the excellent stores sent out from Home.

II.—HELLES.

A day or two after Christmas our divisional headquarters and two brigades landed at Helles, where we relieved the 42nd Division in the Gully Ravine:

At that time, I believe, the évacuation of Helles had not been finally decided on, but the weather, which had made a change for the worse, proved the dominant factor in coming to a decision. Storms were brewing, and the sea was rising, making embarkation a matter of some difficulty. If we were to evacuate the Peninsular, we must "stand not on the order of our going," but go quickly. The Navy stated that in a short time, they would be unable either to land stores, or to evacuate the troops.

The évacuation was timed for early in January. The same preparations, which had proved so effective at Suvla, were carried out for the withdrawal at Helles. All personnel and stores, which could be spared, were sent away some days previous to Zero day, including a proportion of the horses which we had taken over on landing. The remainder were to be shot.

Intermediate posts on the line of withdrawal were arranged, and connected by telephone, and trails of flour were laid to the beach. At the last moment Zero day was, for some reason, put back for twenty-four hours.

It seemed as if the Turks had some inkling of our impending departure, for on the afternoon of the original Zero day, they launched an attack, preceded by a heavy bombardment, against the trenches held by our left brigade. This was but a half-hearted affair, however, and was stopped without difficulty by our rifle fire, whereupon the few survivors bolted back to cover. The officers could be clearly seen, driving the men out of the trenches with whips.

On Zero-1 day it was blowing hard, and there was a nasty sea running. It blew still harder all Zero day, and the wind increased

considerably at nightfall. Soon after dusk the first motor lighter approached the pier, and tried to make fast alongside. Her petrol engines, however, were not sufficiently powerful to battle with the waves, and she drifted helplessly on to the rocks. The second lighter was more successful, and made fast to the pier, where the troops embarked at once.

Embarkation proceeded apace, and the lighters made for open sea, where the troops were transferred to the war-ships standing by. One of the clerks in our divisional headquarters had a narrow escape from being left behind. He had fallen asleep in a dug-out, and was only discovered by chance at the last moment.

The only mishap in the transfer of troops that occurred happened to an officer's servant, who fell into the sea when stepping off the lighter. Fortunately for himself, he was carrying his master's life-saving waistcoat, to which he clung and was hauled out none the worse.

The grounding of the first lighter had unfortunate results for our telephone operators and final details, who had to march some miles along the sea road to "W" Beach, where they embarked. Even then our troubles were not ended. It was now shortly after 4 a.m. and the magazine was timed to be exploded at 0420. As we gave way, we brought up with a tremendous jerk, caused by fouling a hawser made fast to the pier. After mighty efforts, we broke clear, and made for open sea at our best pace, never very great. Shortly afterwards the magazine went up, and for several seconds the sky rained shells and lumps of iron all round us. We escaped by a miracle, and were taken in tow by one of the powerful tugs which were standing by, and towed across to Imbros. We left the same afternoon for Mudros in a cruiser, where we had the first hot bath and square meal we had had for some days. At Mudros we found our advanced party with our kit, and all was well.

SIR STAMFORD RAFFLES AND SINGAPORE.

BY

"ANONYMOUS."

This contribution does not claim to be original and is merely a "Précis" of the book "Raffles" by Professor Coupland, Fellow of All Souls College, Oxford, and published by the Clarendon Press, Oxford, which has very kindly permitted the "Précis" to be made and also to be republished in this Journal. The "Précis" has been made to demonstrate the advantages of Singapore as a Base.

The Singapore Base for the British Fleet being now an accomplished fact, it is interesting to review the life of the man who made the Base possible.

Stamford Raffles was born on the merchant ship "Ann" (of which his father was the Master) off Port Morant, in Jamaica, a few months before the "Battle of the Saints," in which Rodney caught and crippled the French Fleet among the Leeward Islands, by which "the second British Empire" it may be said was born. His birthplace was appropriate, as his career was to be associated with the expansion of British trade in the Tropics. Little apparently is known of his early youth, except that he was devoted to animals and gardening.

As his father was in debt, the boy Thomas Stamford had to leave school at the age of fourteen; his father having obtained for him an extra-clerkship in the office of the East India Company.

His industry and capacity made such a deep impression at India House, that after five years, he was given a post on the regular establishment which would ordinarily have been filled by patronage, and, after another five years, he was appointed Assistant Secretary of the Presidency, (see map), which had recently been formed with a Premier and Council after the acquisition of the Island of Penang by the East India Company, out of that Island, and a strip of territory in the Malayan Mainland, known as Province Wellesley.

Raffles salary was now £1,500 a year, as compared with his previous salary of £100 a year, in fact a remarkable promotion for a clerk of twenty-four, but, in urging his appointment, Mr. Ramsay, the Company's Secretary at India House, declared, that though the departure of so competent a subordinate "would be like the loss of a limb to him," he could not obstruct the promotion of one who possessed "such superior talents and so amiable a character."

He embarked in April 1805, taking with him his wife and his eldest sister.

Even on the way out, which then took several months, he studied the Malay language, which, having the gift of tongues, he could speak and read with ease, soon after his arrival.

This was a notable achievement, and in its results had a decisive influence on his career, for it enabled to get him to know even the shy, reserved, and attractive Malay people, who were still further won over by his sympathetic nature, revealing itself in his tact, courtesy, and consideration. Having won them, he learned their customs and traditions, and in course of time, acquired an almost unique knowledge of Malaya past and present.

This led him to his dream that, under British tutelage, Malaya might attain a safer, freer, happier life, than it could ever find unaided.

The appointment was no sinecure. He was, in 1807, promoted Secretary to the Council. He had become official Malay Translator, and he undertook the office of Registrar to the new established Court of Justice.

He had become so indispensable in fact, that when he went away for the sake of his health, the Governor implored him to return.

He even compiled a code of Malay laws, worked at a history of the people, and wrote a paper on the Malay nation for the Asiatic Society of Calcutta, in addition to his other labours.

It happened also that at that moment, the political fate of Malacca as a European Settlement was under discussion, and no one so alert and open-minded as Raffles, could fail to form opinions of his own about it.

As a matter of fact, the English and the Dutch East India Companies, had been deadly rivals in the Malayan Archipelago, since their foundation within two years of one another, at the opening of the seventeenth century, and the Dutch having ousted the Portuguese eventually after the tragedy of Amboyna, succeeded in eliminating English trade throughout the Islands. The English had in fact, concentrated on their Indian trade, whilst the Dutch, left but with one small Settlement at Chinsura, in Bengal, had concentrated in the insular field.

Both their spheres of influence overlapped moreover at the point at which the most westerly of the Malayan Islands impinges on the south-eastern corner of the Asiatic Continent ; which point, as it happened, was of supreme importance in the strategy of the Far East, *viz.*, the Malacca Straits.

In Sumatra, for instance, the English had the post of Bencoolen, whilst the Dutch had the post of Malacca, and it was not until 1876 that the English approached the Malayan Coast by the purchase of Penang from the local Sultan, whilst in 1800 they extended their foothold to the adjacent mainland, by the similar acquisition of Province Wellesley.

Napoleon had, meantime, occupied Holland, and, whilst the Dutch Republic was practically a pawn of France in the East Indies, similarly, the Dutch posts were practically French posts, and the Cape of Good Hope, Ceylon, and the Malayan Archipelago, belonging to the Dutch, in addition to Mauritius and Bourbon, already French, allowed Napoleon to obtain a strangle-hold on the Indian Ocean.

Even though the British Government, realizing the danger, had eventually seized the Cape, Ceylon, and Mauritius, Napoleon was able to send Marshal Daendels, an able Dutch Jacobin, to strengthen the defences of Java, reorganise the Dutch Colonial troops, and await the moment for a descent on India. The British Navy, however, in 1806 and 1807 destroyed the two Dutch squadrons off Java, in 1808 occupied The Moluccas, and, in 1810, an expedition despatched from India by Lord Minto, the Governor-General, seized Mauritius and Bourbon, and desired to seize the only link remaining in Napoleon's chain, namely, Java.

When Raffles visited Malacca in 1808, he was appalled to learn that the Directors of India House had decided to abandon it and retain Penang only. In fact the Fort had been destroyed, and the ordnance and stores had been removed to Penang. Raffles then took upon himself the responsibility of drafting a minute, clear, concise, and overwhelming in force of argument, pointing out the impracticability of the Directors' policy, and clinched his argument by one appealing to the India House, *viz.*, that the Malays paid their dues cheerfully, and were never in arrears, and, in the very last paragraph, declared that all the Malay Rajahs to the eastward ought to be brought under

British control. The report achieved its object. The Court of Directors decided to reverse their policy and Raffles was officially commended.

The report had, however, attracted attention in other quarters than India House. It happened that a certain John Leyden, who hailed from the same Scottish dale as Lord Minto, was one of Lord Minto's most useful confidential advisers. He visited Penang in 1808, and, sharing the same interests in the life and language of the peoples as Raffles, the two men had struck up a swift and cordial friendship, and thus a link was formed between the Secretary at Penang, and the Governor-General at Calcutta. Lord Minto, receiving a copy of the Malacca Report, instantly approved of it, declared the destruction of the Malacca Port to be "a most useless piece of gratuitous mischief" and asked, through Leyden, for further information.

Thereupon Raffles took leave and sailed for Calcutta where Lord Minto not only expressed his delight at seeing him, but determined to fit him into his plans by appointing him "Agent to the Governor-General with the Malay States." Raffles selected his headquarters at Malacca.

Lord Minto followed up this act by himself accompanying an expedition which was to and which did capture Java, in the administration of which the young Governor was to all intents and purposes, supremely successful.

He altered the system of land tenure, and appointed British officials as superintendents of the new system. He raised the revenue to a million and a half rupees. He established peaceful and friendly relations with the population. He conciliated the Dutch Colonists by appointing two Dutchmen on his Council. He made a treaty with the Emperor of Java. He, personally, with a force of 1,200 men, seized and deposed the Sultan of Mataram, who had rebelled, and set his heir on the throne. He improvised a Civil Service, and abolished punishment by torture and mutilation, and re-established the Courts of Law. He established "Trial by Jury," and made trading in slaves a felony. But his financial arrangements were hampered by the fact that the previous Dutch Government, in desperate need of money, had sold certain Provinces to Chinese speculators with disastrous results and thousands of inhabitants had left their homes for other parts of the Island, before the Dutch Government fell.

Raffles decided that the ill must be undone. He bought the Provinces back, and bought up the paper money issued by the Dutch Government, the value of which money, however, had seriously deteriorated. Raffles had no ready money with which to meet the expenditure, and he determined to sell some of the public lands, which matter was approved by Lord Minto as a matter of "urgent necessity."

But the Directors counted it as a very bad blunder.

A Colonel Gillespie, who had been a member of the Council, who had objected to certain action taken by Raffles, and who had consequently been transferred to the Commander-in-Chief's staff in Bengal, made grave charges against Raffles as regards the system by which the lands had been auctioned.

Meanwhile Lord Minto's term as Viceroy had expired, and he was replaced by Lord Moira.

Lord Moira became convinced that the young civilian was incompetent and possibly dishonest, and Raffles' administration and conduct were arraigned. As regards the personal question, his honour was completely cleared, but only after long delay. The Directors decided to remove him from Java, despite his protest in writing to the President of the Board of Control that Java could pay its way. But he could obtain no hearing. Meanwhile, under the Treaty of Vienna in 1813, Britain restored all her East Indian acquisitions including Malacca, to the Dutch.

In May, 1815, Raffles was relieved by the Court of Directors of his duties in Java, without a word of praise or credit for good intentions, in fact with a reprimand, and, in the following October, Lord Moira, whilst he exonerated Raffles of all personal impropriety, condemned his work.

Raffles was however spared the humiliation of handing back Java to the Dutch, as, in March, 1816, he had handed over his office to his successor. In August he had however the satisfaction of knowing that he had won the intimate affection of those about him. The memorial received from the staff after he had left evinced their attachment. Both the Dutch and British had in fact respected and admired their young Governor, and even the Dutch regretted his departure; looking upon him as a friend.

Meantime, troubles showered on him fast. His wife and children had died during his Governorship of Java. Lord Minto, his former patron had died on his way from London to his Scottish home. Thus, whilst at the age of thirty Raffles' ambitions had seemed on their way to fulfilment, at the age of thirty-five, his dreams had apparently been shattered. He decided, for medical reasons of health, as he was no longer required in Java, to take leave and go to England. The voyage had one unique incident. The ship touched at St. Helena, where Napoleon showed how keen his interest had been in the East Indies, by plying Raffles with questions faster than he could answer them.

In spite however of everything, Raffles' spirit remained undaunted. He wrote to Ramsay. "I remain wretchedly thin and sallow, with a jaundiced eye, and a shapeless leg, yet, I thank God, my spirit is high and untamed, and the meeting with friends, will I hope, soon restore me to my usual health."

Raffles' hopes were fully justified as regards his health, and, although high political circles and the Mandarins at India House might have been a little cold towards him, especially as they felt uneasy as to their past treatment of him, he found that whilst he had left London, an insignificant and unknown youth, returning as he did, as an ex-Governor, and as an Oriental Savant, with the glamour of the East encompassing him, he had become one of the "lions" of the Season, and, wholly himself again, he enjoyed it all immensely. During his time in London, he had prepared a History of Java in two volumes, and had dedicated it to the Prince Regent.

The author was bidden to attend the next Levée, and the Prince, after addressing him for nearly twenty minutes, and thanking him for the entertainment and information he had derived from the perusal of the volumes, further expressed the high sense he entertained of the eminent services he had rendered to his country in the Government of Java, and conferred on him the honour of Knighthood.

Charles Grant, one of the leading members of the Court of Directors, and well informed as to Raffles' dealings with the slave-trade, introduced him to Wilberforce, the "Great Emancipator" and a firm believer in the propagation of christianity in the East, in which Raffles was also interested.

It is believed that Raffles also met the aged Warren Hastings, who died less than a year after Raffles' return to the East.

In October, 1817, Raffles took up the post of Lieut. Governor of Bencoolen, bestowed upon him by the Directors, after his character had been fully and finally cleared, as some small amends for his treatment, and as a peculiar mark of the favourable sentiments which the Court entertained of his merits and services.

Thus he returned once more to the East, with his prestige re-established, at the age of thirty-six, his second wife accompanying him. On his arrival at Bencoolen, he found it, having been smitten by a series of earthquakes, in ruins, and almost derelict. The roads were impassable and the town was over-run with rank vegetation. Government House was the resort of ravenous dogs and polecats.

He promptly set to work to set things right. He enfranchised the slaves. He abolished the system by which the local peasantry were forced to cultivate pepper-vines, and sell their produce to the Company at a low fixed price. He closed cock-fighting and gambling dens. He and his wife crossed the great Chain Mountains, supposed to be impassable by the natives, and explored the interior of Sumatra. He drew up a solemn official protest against the injustice of the Dutch Government in Batavia, and published it to the world, for which he was severely censured by Lord Canning, and the Court of Directors.

But matters now took a turn for the better. He had sent a full report of the situation also to the Supreme Government in India, and the Viceroy, now Lord Hastings, summoned him to India, where he again arrived in 1818, on the threshold, had he known it, of his greatest and most durable achievement.

Lord Hastings received him very favourably, and agreed that a British post should be planted inside the Archipelago, provided this could be achieved without too serious friction with the Dutch, and his parting words to Raffles on his departure were. "Sir Stamford, you may depend on me."

The place Raffles selected for the post was Singapore, the lines of whose old city and defences were still to be traced.

If the whole field had been open and Raffles had had time to prospect it all at leisure without fear of being forestalled, he could not have found a better site for a British commercial centre, and a link with

the Further East. Almost automatically, its position began to tell. In January, 1819, when Raffles landed, it was little more than a derelict native village. In June its population was 5,000. In 1824, the number had doubled, whilst 35,000 tons of shipping used the front, and in 1835, the population was 30,000 and the tonnage 200,000.

At Penang however, Raffles found the Governor, Colonel Bannerman, vehemently opposed to the whole object of his mission; he being terrified of the Dutch. Bannerman could not however obstruct Raffles at Singapore, which came under the Governor of Bencoolen.

Raffles found that the lawful ruler of Singapore was the Sultan of Johore. The native Viceroy of Rhio had, however, set up the younger son of the deceased Sultan against his will as Sultan, in the absence of the elder brother, the natural heir, whose succession was supported by the two hereditary Chiefs, their consent being required for a legal succession to the Sultanate.

Raffles interviewed one of these Chiefs, the Resident-Governor of Singapore, and, having learned that the Dutch made no claim at all in that neighbourhood, concluded a preliminary Treaty with him, permitting the establishment of a British Factory at Singapore, which Treaty was confirmed by the new Sultan, who, together with the Resident-Governor, signed a Treaty on the 6th February, to the effect that: (a) the British were to be free to erect factories in any part of the Sultan's realm, to which no land therein was to be alienated; (b) no Treaty was to be concluded with any other Foreign Power; (c) the Sultan's safety was to be guaranteed so long as he resided near a British Station; (d) annual payments of 5,000 and 3,000 Spanish dollars respectively were to be made to the Sultan and the Resident-Governor, the latter also to receive half of the duties levied on shipping.

To protect themselves however from the Dutch, the Sultan and the Resident-Governor wrote to the Dutch Authorities, and pointed out that the British had forced them to do what they had done. To this Raffles agreed, but he obtained his friends' signature to an uncompromising affidavit, viz., "I here call God and His holy Prophet to witness that the British established themselves at Singapore with our free will and consent, and that since the arrival of the Honourable Sir Stamford Raffles, no troops have been landed, nor has anything been done without the accord of the Sultan of Johore and myself."

The resentment of the Dutch was fierce. The Governor of Malacca threatened to sail at once and in force for Singapore. Colonel Bannerman bowed almost on his knees to the storm. He forwarded the Dutch letter of protest to Lord Hastings with a covering letter of cordial sympathy, and meanwhile appealed to the Dutch Government of Malacca not to take action. He also refused to send the troops demanded by Major Farquhar for the purpose of warding off the imminent Dutch attack on Singapore, although Major Farquhar was acting for Raffles, who had proceeded to Achin.

It then transpired that Lord Hastings had changed his mind and had sent an urgent letter hurrying after Raffles instructing him to abandon his mission altogether. The letter, happily, did not overtake Raffles, who had meanwhile submitted a long report detailing his action in the establishment of the post at Singapore. Lord Hastings recovered his equilibrium, and drafted a dexterous reply to the Dutch protest.

To Colonel Bannerman's report Lord Hastings sent a stinging rebuke in support of Raffles' action, to which Colonel Bannerman was obliged to bow, and he despatched the troops to Singapore. Thus, finally, Lord Hastings had kept his parting promise to Raffles. The Foreign Office and the Directors were however much upset. They sent a stiff despatch to the Viceroy impugning Raffles' action. They even reminded Lord Hastings that Raffles' previous record had rendered doubtful the expediency of employing him at all in any way in the Eastern Seas, but, as a saving clause, they said that they were not proposed to take action as regards either Singapore, or Raffles, over the head of the Viceroy.

In Charles Grant however Raffles had a powerful friend at the Court of Directors, and Lord Hastings stuck to his guns. The storm blew over and a friendly bargain was finally struck between the British and the Dutch by which Britain retained Singapore, with its sheltered roadstead and fine natural harbour, also continental Malaya with its command of the Malacca Gate, whilst she surrendered Bencoolen and all claims in Sumatra.

Meanwhile, in 1821, the tragedy of Java had almost been repeated. In the course of three weeks, three of Raffles' children had died and he and his wife had become seriously ill, and, in 1822, he determined to visit Singapore once more, before leaving the East for ever.

It was not only its inherent magnetism that had drawn Raffles back to Singapore. He was seriously at odds with the Resident, Colonel Farquhar, and he determined to take over its control himself, temporarily.

He discovered on arrival, that Farquhar had directly disobeyed his imperative instructions on two important points, and had licenced cock-fighting and gambling-houses, and had disposed of some of the best lands to private individuals, which had been reserved by Raffles for public purposes.

Raffles now prohibited slave-trade utterly and for all time, and declared cock-fighting, and gambling-houses illegal. He bought back the lost sites, and had the buildings removed. He appointed some of the leading British merchants as Magistrates, and indeed, they became something akin to a Legislative Council. Native headmen were appointed under the Magistrates' control. Raffles further declared Singapore to be a free port, open to ships of every nation, free of duty, equally and alike to all. He encouraged schools for Malay children, under missionary control. He raised 17,000 dollars, and founded an Institute for the teaching of all branches of knowledge, especially the Malayan and Chinese languages and literature.

Having accomplished all this, there was now no necessity for him to prolong his stay in Singapore. General John Crawford, who had written the History of the Indian Archipelago, was appointed Resident, Singapore now having been transferred to the control of the Government of India. The doctors had warned Raffles that only immediate departure to Europe could save his life, and, shortly after the foundation of the Institute, he set sail.

On his last voyage, there were touches of both comedy and tragedy. Although his ship had run short of water, the Dutch Resident at Rhio denounced him as a spy and refused to supply it. He also had to call at Batavia, where, as Lady Raffles was indisposed, he asked the Governor-General, Baron von der Capellen, if she could land for a few days, whilst the ship unloaded. The Governor-General expressed his amazement at Raffles coming to Batavia after all that had happened since 1816, and stiffly refused to have any further communication with him, though, owing to Lady Raffles' indisposition, he allowed the ship to remain at Batavia for a few days. Raffles then set off for Bencoolen, wound up his administration there, losing

his other child, however, during his stay, he and his wife again becoming seriously ill. When a ship did arrive, after sailing at dawn, it caught fire the same evening, and the passengers and crew had again to return to Bencoolen, a distance of fifty miles, in the ships' boats. To add to the disaster Raffles lost in the fire the most precious of the treasures which he had collected both at Bencoolen and Singapore, including a large scale map of Sumatra, on which he had expended infinite personal labour during the time he was at Bencoolen.

However this extraordinary man refused to be defeated. On reaching Bencoolen, he at once set to work to draw a new map of Sumatra, to obtain more scientific drawings, and to replace some, at least, of his Zoological specimens.

Fate did indeed seem to be against him, as his next ship met a terrible gale, lasting three weeks, and he found the news of his mother's death awaiting him at St. Helena.

He finally landed in Plymouth, on the 22nd August 1824, a little old man, all yellow and shrivelled, with hair pretty well blanched, although only forty-three years of age. He was constantly affected by headaches. The least exertion of mind or body was followed by days of pain and sickness. But he was indomitable. He unpacked and arranged the hundred and seventy cases which had survived the "grand collection." He completed the map of Sumatra, and another of Singapore, and he founded the Zoological Gardens in Regent's Park.

In the meantime, he had carried through his plan of "turning farmer" and he had bought an estate at High Wood near Mill Hill, next to that of his friend, Wilberforce.

Whilst in London he had become, as Founder of Singapore, a bigger "lion" even, than as Governor of Java.

But further trouble appeared even now to be in store for him. Colonel Farquhar attacked him in a memorial to the India House, stating that the Settlement at Singapore, had been formed at his (Farquhar's) suggestion and had matured under his personal management, and complaining lengthily of Raffles' flagrant injustice and tyranny. Raffles drafted a careful and not immoderate reply, the matter dropped, and Raffles then knew that as regards the general body of public opinion his reputation was secure.

Indeed, Canning, now Foreign Secretary, was the first to make the "*amende honorable*." The Court of Directors were not however so generous. Their general view as regards Raffles and Singapore was that, "the Country is chiefly indebted to him, for the advantage which the Settlement of Singapore has secured to it."

As regards money matters, the Company treated him disgracefully. They most unjustly demanded from him a sum of £20,000, for various items of salary, to which no objection had been made for six years. Meanwhile, another blow fell, as, owing to the failure of a Calcutta firm, he lost a sum of £16,000.

He faced these sudden blows to his peace and fortune with characteristic courage, offered to hand over his Government Securities in Bengal in partial payment, and asked for reconsideration of the question.

His death, however, from apoplexy, on his forty-fifth birthday intervened, but even after his death, the Company accepted £10,000 from his widow, in final satisfaction of their claims.

Previous to his death however Raffles had refused to give way to depression. As he put it to Wilberforce, "I have had a great deal to annoy me since I saw you last, but it is a wordy affair, and will I trust, not materially affect our happiness."

A tablet on the wall of Hendon Parish Church shows that Raffles' body is buried there. Westminster Abbey contains a statue of him, and his bust is in the Lion House at the Zoological Gardens.

But his true memorial is the City of Singapore, whose population to-day is half a million, whose tonnage in 1924 was twenty-two millions, and whose volume of trade is larger than that of all the Indian ports put together. It may indeed be called "The Queen of British Malaya," and its Raffles Quay, Raffles Place, and Raffles Hotel, shows that he has never been forgotten, whilst in the centre of Raffles Plain stands the Founder's Statue, ever watching over Singapore.



W. G. Wright

THE POWER OF THE UNCONSCIOUS
OR
CROMWELL'S LESSON TO POSTERITY,
BY

CAPT. A. L. PEMBERTON, M. C.

*"No one rises so high as he who knows not whither he is going."
(One of Cromwell's own sayings).*

"War" so our Field Service Regulations tell us, "is an art, and not an exact science." (1) It is not surprising, therefore, to discover that some doubt still exists as to how it should be studied. "Read military history," say one school of thought, basing themselves upon Napoleon. "Study the lives of the great captains, and see how they achieved success."

"To the devil with history and principles," say the other school, taking Verdy du Vernois as their apostle. "What is the problem?"

If war were a science, of course, this controversy would not arise. When somebody else has gone to the trouble of evolving, and confirming, a so-called scientific 'law,' it is mere presumption on our part, and a waste of time, to do over again what has already been done for us. Until we have some definite proof that one of these laws requires modification, it is better to accept it as it stands, and to interest ourselves in its application to the problems of our daily existence, rather than in the manner of its evolution.

In the case of an art, on the other hand, there are no such definite laws upon which to base one's practice. Either because the subject matter is not considered important enough to merit serious investigation by the scientist, or because it is so obscure as to have evaded all attempts to reduce it to a system, the study of an art is usually confined to a few oral traditions, or the recorded utterances of a few great masters. The rest is left to personal experience, and individual genius.

When, therefore, an artist sees an effect which he would like to reproduce, he has no quick and sure means of discovering how that effect was achieved. He can watch an expert at work, or he can buy

1 See F. S. R. II, 1924, Sec. 3. 2.

a book of 'hints to beginners,' but there is no guarantee of success in either method.

Nor is it merely an inability to state the problem clearly that produces this uncertainty. For example, it is perfectly obvious what a golf expert means when he tells a pupil to keep his eye on the ball. It is so obvious in fact that, as a contribution to one's knowledge of the game, it is not worth the telling. No one would be so stupid as to imagine that he could hit a ball cleanly without looking at it.

Yet the fact remains that countless people appear to attempt this remarkable feat daily. And the explanation appears to be not that they are lacking in intelligence, but that their mental balance is imperfect, and that they lack the power of concentration. They mean to look at the ball, but at the critical moment something else distracts their attention. Somebody coughs, a dog wags his tail, and the whole of their preliminary efforts are wasted. They have failed because, in military parlance, they have been incapable of maintaining their objective.

War is just like that. It is seldom difficult to know what one ought to do. The trouble lies in doing it. The veriest idiot would not attempt to slay an opponent with a walking-stick if he happened at the same time to be in possession of a sledge-hammer. Yet quite clever men have been known to disobey, in war, the military principle of concentration. There are so many excellent reasons for dispersing one's forces, so many conflicting factors to distract one's attention from the main business of dealing the enemy a knock-out blow at the vital point. Anxiety concerning one's own personal safety, uncertainty as to what unpleasantnesses the enemy has in store for one, fear of responsibility in the event of failure; these and many more arise to block the paths of common sense and duty.

In short, it is human nature itself which is the main obstacle to progress. War, the oldest of all arts, has remained an art precisely because of man's inability to master the secrets of his own inner nature. It is not the desire which has been lacking, but the means. It has taken us a long time to acquire even the consciousness that such an inner self exists, and it may take us a longer time still before we can devise such standards of measurements as will transform the art of war into a genuine science.

But a beginning has been made. For half a century or more, psychologists have been at work upon the measurement of mind, and if the results have not yet been startling enough to impress themselves upon the general public, they have nevertheless been considerable. This has indeed been recognized by the military authorities, who have now included psychology among the subjects of general interest recommended for study by the soldier. (1)

Personally, I am of the opinion that we should go further than this, and make the study of psychology compulsory for all officers. What, after all, is the use of saying that "success in war depends largely on a knowledge of human nature" (2), if we do not take proper steps to see that every officer is in possession of the very latest information on the subject? Either we recognize psychology as of some value, or we do not, and if we do—as is apparently the case—then surely it ought to be the first subject for study by our potential commanders!

One of the first results of such a study would, I am sure, be a modification in our methods of studying military history; a modification which would incidentally go a long way towards reconciling the opposing schools of thought referred to at the beginning of this article. For our object would then be, not to confirm the eight principles of war, which are all perfectly well established, but to discover what it is that has led some men to disregard them, while others, no more knowledgeable than themselves, seemed to obey them instinctively.

It would be of great assistance in solving this problem, if we could commence our investigations upon a commander whose success in war was obviously due to his own natural aptitude, and was in no way the result of a military education. Hence, the selection of Oliver Cromwell. A man who, at the age of forty-three, having never heard a shot fired nor set a squadron in the field, could organize, train and command an army such as the New Model, and who, after eight years of strenuous campaigning, could boast that he had never been worsted in a single engagement of any importance, was indeed a born soldier.

The question is, whence did this aptitude spring?

1 See Training and Manœuvre Regulations, =1923, Sec. 8. 5.

2 See F. S. R. II, 1924, Sec. 3. 2.

It was certainly not the result of great intellectual development. Cromwell was "a slow worker with his brain, however rapid a handler of cavalry. He was never, throughout his life, at home in the world of intellect, when the occasion demanded careful thinking. His mental qualities were very largely of the emotional sort, where what is called inspiration comes in a flash and takes action by impulse." (1).

That does not mean, however, that he had no intelligence. It is a common mistake to confound intelligence with reason, but it should not be made by anyone who has studied modern psychology. Intelligence, as generally understood, is an attribute of the unconscious mind, and is perhaps best described as educability, or adaptability. Its main characteristics are acuteness of perception of and rapidity in reaction to, external stimuli. Reason, on the other hand, is the faculty of mental balance, and the means by which intelligence is exploited in the interests of man's own self-imposed standards of behaviour. The one is subjective, the other objective, in its action.

It is quite obvious, of course, that a condition of mental equilibrium may exist without recourse to the controlling influence of reason. Animals, for example, have the power of adapting themselves to the needs of their environment. But such adaptation is entirely blind and permits of no arbitrary modifications. Any departure from the standard will quickly lead to disaster.

It was this kind of adaptation which characterized Cromwell. He was, "with all his strength and self-will, merely the product even the slave, of his age; the sport of his circumstances, the cork tossing helplessly on the waves of the history of the nation . . . He, himself, fatalist and mystic and man of moods, would have been the first to admit his impotence." (2)

And it is this fact which explains the extraordinary inconsistency of Cromwell's career. It explains, as nothing else could, why this "pure mystic, bound hand and foot by that indecision which is a natural consequence of such an unworldly faith," was transformed, in the flash of an eye, into "a hard-riding cavalry colonel, who was irresistible on the field of battle." (3)

Cromwell was born with the unconscious mentality of the fighter, and he lacked the intellectual development which would

1 See "Oliver Cromwell", by G. R. Stirling Taylor, p. 54.
 2 See do. do. do. p. 24.
 3 See do. do. do. p. 16.

have enabled him to adapt himself to the airier passages of a parliamentary debate. As a politician, he has been condemned by Professor Gardiner as a man "full of vague impulses, thinking in terms of force instead of intellect. As he had the impulse to violence himself, he could impute no other intention to his opponents."

A most lamentable trait in a politician, no doubt, but an admirable frame of mind in which to enter upon the field of battle. In war, we know, victory can be won only as the result of offensive action, and Cromwell was to prove the truth of this principle to the full. From those early days in 1642 when, while others contented themselves with talking, Oliver was sending money and arms to his people in Cambridge, till the stormy dawn of the 3rd September, 1650, when, with his "poor, shattered, hungry, discouraged army," he struck at, and routed, the greatly superior Scotch army at Dunbar, he never failed to get his blow in first.

Once only did he hesitate, and that was on the first occasion that he commanded in person on the field. It was at Grantham in May, 1643. Cromwell, with about 12 troops, met a superior force of Royalist horse from Newark, and, in his own words, "after we had stood a little above musket-shot, the one body from the other, and the dragoons had fired on both sides for the space of half an hour or more, they not advancing towards us, we agreed to charge them."

The result was a complete success, and he never hesitated again, but was invariably the first to charge.

Let us admit, then, that Cromwell never achieved anything except by force. As a soldier, it was the only chance he had of achieving anything, and we are not for the moment concerned with his ability as a statesman. The main point to be grasped is that he excelled at fighting because he loved fighting. He never hesitated in war because he never felt any doubts as he so often did in peace, as to the propriety of his actions. His mental balance never deserted him, however hot the fighting. He was "both cautious and daring; both patient and swift; both tender and fierce; both sober and yet willing to face tremendous risks; both cool in head and yet with a flame of passion in his heart." *

* See "Oliver Cromwell", by John Morley, p. 81.

It was this perfect mental equilibrium that was the basis of all Cromwell's military greatness, just as it was the lack of it that was responsible for his many political and diplomatic blunders. From it he derived that comfortable feeling of self-assurance which made him willing to accept any responsibility, however great. It is only the man whose mind is at peace who can face responsibilities without a tremor, as we see from Cromwell's own indecisiveness the moment he got out of his natural element, which was fighting. Compare, for example, the cool, confident and commanding Cromwell of Dunbar with the hysterical buffoon who inked Marten's face as they stood together beside King Charles' death warrant, or the blustering tyrant who screamed abuses at his political opponents and insulted the dignity of the House by snatching away its 'bauble' under military escort.

Away from the Army, Cromwell never faced up to his responsibilities. He rushed blindly into them, and often afterwards suffered agonies of remorse.

It was the same with his powers of concentration. As a soldier, he never missed anything. His nervous system, being undisturbed by any distracting influences from within, was left entirely free to receive impressions from without. Moreover he saw these externals as they really were, and not as some preconceived inner notion made him wish to see them.

Hence he never allowed his military plans to soar above the physical limitations of the armies he commanded. He alone, of all the commanders on both sides, resisted the temptation to join in the desultory fighting and predatory raids which marked the winter campaign of 1643. For he realized that "it was necessary to solidify his position in the eastern counties and thoroughly organize his troops, before any real success could be gained from expeditions beyond." *

Similarly he refused to set out for Ireland in 1649—though urged by many to do so—until the proper administrative arrangements had been made for the supply of his army. Like Napoleon, he was perfectly well aware that an army moves on its belly, and like Napoleon, he never allowed himself to forget this fact.

* See "Cromwell as a Soldier", by Lt.-Col. T. S. Baldock, p. 68.

Yet this same man, when he had laid down his arms and assumed the reins of government, was continually confusing his own religious convictions with the economic interests of his country. He, who could tolerate the most diverse brands of Protestantism, was inflamed to hatred by the mere thought of Popery.

Surely no man in history affords us such a convincing example of what a powerful friend, or what a mischievous enemy, we may possess in our unconscious mind. And it rests with us as to which of the two it is to be.

What, then, are we going to do about it? Are we going to let ourselves remain, like Cromwell, the sport of circumstances, or are we going to set about finding a means of ensuring that square pegs are not forced into round holes?

The answer to this question would carry us far beyond the limits of the present article, but we might in conclusion try to fix clearly in our minds the two main psychological lessons handed down to us by Cromwell. They are neither of them, of course, new lessons, but they are so often obscured by our study of less important details that they are worth reiterating.

The first is the power of the unconscious mind. We have long recognized this in the statement that the leader of men is born, not made; but it is curious how often we appear to ignore it. It is as if we were hypnotized sometimes by our own peculiar faculty of reason into depreciating the humbler foundations of our being. Too often we see intellectual development, and even mere knowledge, treated as if they were efficient substitutes for instinct.

That, of course, is ridiculous. Reason, as I have said above, is the faculty of mental balance. It could no more drive the human machine than a steering-wheel could drive a motor-car. And as for knowledge, it is no more than a collection of 'gadgets' that have been superimposed upon the transmission system of the human machine. At the best they represent added complexities which, while raising the performance of the machine under certain special conditions, tend to increase its liability to breakdown, and may even render it unsuitable to withstand the rough and tumble of war. At the worst they are mere useless adornments that only confuse the driver and scatter the energy of the machine.

In war simplicity is the first essential, and this is nowhere better exemplified than in the rapidity and unerringness of instinct. It is the duty of intellect to explore the unconscious mental forces that lie beneath the surface of the mind, and thus to ensure that our balance is not upset by interference in matters that do not concern us, or for which we are not by nature well adapted. But it is of no value to rear a beautiful edifice of learning when there is a volcano surging underneath.

I stress this point because it seems to me that there is a danger at the moment of the Army becoming enveloped in too academic an atmosphere. Far be it from me to decry the value of education, but one wonders whether we are not misdirecting some of our efforts when one sees that, since the war, we have set up a school for practically everything except the study of human nature. In the circumstances it is doubtful whether half of what we teach stands a chance of being applied correctly.

And now for Cromwell's second lesson. Again it is an old one, but one which, if well understood by fighting men themselves, is often overlooked by those who are responsible for the control of policy. It is that no general, and ultimately no nation, can hope to achieve success in war unless well imbued with the fighting spirit, or what our German friends have more euphemistically termed the 'will to victory.'

It is time that we of the fighting services came to some agreement with the rest of our fellows as to the exact meaning of this much abused catchword. A man may love fighting without always wanting to knock on the head anyone who appears to be standing in his way. If he has any measure of self-control, he will realize as well as anyone else when convention will sanction the use of force, and when he must resign himself to a settlement by arbitration.

Cromwell himself was a failure in this respect, but because of his failure we are not justified in believing, as Mr. Taylor does, that "if mankind had followed the laws of field-marshal and admirals, the world would long ago have been reduced to ruins and graveyards."* One has only to study the lives of Robert E. Lee, or of the great Duke of Marlborough, to see that it is possible to combine in a single individual the dual rôle of soldier and statesman.

* See "Oliver Cromwell" by G. R. Stirling Taylor, p. 251.

The fighting spirit must, of course, be the servant, not the master of such a personality. Reason must decide when the time has come to abandon words and resort to action, but once the decision has been made the way must be cleared for instinct.

Until we have understood this, we can never fully appreciate the meaning of the second sentence in our Field Service Regulations (Vol. II). "The principles of this doctrine should be so thoroughly impressed on the mind of every commander that, whenever he has to come to a decision in the field, he will *instinctively* give them their full weight." I have inserted the word *instinctively* because it is so obviously what is intended. If we cannot act instinctively in a crisis, we are seldom likely to get the opportunity to act at all. We shall be beaten before we have had time to think.

To this extent we may believe, with Cromwell, that "no one rises so high as he who knows not whither he is going."

A UNIVERSITY TRAINING CORPS ANNUAL CAMP

By

CAPTAIN J. W. PENDLEBURY, M. C.

Before planning out a programme of work for a University Training Corps Battalion Annual Camp, we must first have clear in our minds—

- (1) The object of the University Training Corps.
- (2) The means at our disposal.
- (3) The standard of training already reached.

A consideration of these three factors will at once give us a rough outline of the work to be done, and the details will then be a simple matter.

The first factor, the object to be attained by the University Training Corps :

The Auxiliary and Territorial Force Committee in their report, dated 23rd January 1925 outlined the rôle of the University Training Corps as follows :—

“ We are of opinion that in the present stage of India's evolution and for many years to come, the U. T. C. should be regarded as the most important section of the Territorial Force. By means of the U. T. C. if properly organised and developed, it is possible to educate and influence over a number of years that large body of young men who should become the leaders of thought and the teachers of the next generation.....they will.....take with them the spirit of patriotism, *the sense of discipline and the improved physique* which will be their legacy from the University Training Corps, and their example should serve to inspire a widening circle of the people of India with a sense of the benefits which fitness for military service confers both upon the individual and the community as a whole....
....we envisage the U. T. C. of the future not only as a school for training the young idea in elementary military matters, but as the recognised recruiting ground for the officers, N. C. O.'s and men of the Indian Territorial Force, and later as a potential source of supply of candidates for commissions in the regular Indian Army.”

The first object of the University Training Corps, therefore, is to foster military discipline, and to improve physical fitness. After that, opportunities must be given for the attainment of military knowledge, and for the development of the power of leadership. The spirit of patriotism will naturally follow.

The second factor, the means at our disposal :

These are :—

- (1) The University Training Corps organisation, a battalion consisting of 4 companies of 4 platoons each, each platoon consisting of 4 rifle sections.
- (2) A permanent staff consisting of an adjutant, a regimental sergeant major, a regimental quartermaster sergeant and 4 staff sergeant instructors—all British.
- (3) A brigade staff, British and Indian regiments in the station who are prepared to help with lectures and demonstrations.

The third factor, the standard of training already reached. This will depend mainly on the date of the camp. The ideal time for camp is after the university annual examinations at the end of a training year. This, however, involves camp being held in the hot weather, and therefore in the hills—and this is ruled out on the score of expense. The other periods available are, one in October and one in December. If the camp were held in October, from 30 to 50 per cent. (the annual turnover of a University Training Corps battalion) would be recruits with little or no training (enrolment begins in August in most universities).

By December, recruits should have put in from 20 to 40 hours' drill, and should have learnt the rudiments of squad drill, arms drill and platoon drill.

The Annual Camp of the 3rd Battalion, University Training Corps is held in December.

We have at the time of the annual camp, therefore,—

- (1) From 50 to 70 per cent. trained men, who have completed preliminary training, who have attended at least one annual camp and who have fired at least one musketry course.
- (2) From 30 to 50 per cent. recruits, who have completed 20 to 40 drills, who have not fired a course of musketry, and who have not previously attended an annual camp. (Companies

are encouraged to go out for a week-end camp some time before the annual camp. A company week-end camp has been found more beneficial from a training point of view than a month of ordinary parades.)

In practice, however, it has been found that there is no need to differentiate between recruits and trained men in camp when this is held in December. Provided that the work in camp is simple and progressive, the recruits can keep pace with the trained men.

The Programme of Work.

We have seen that the object of training in the University Training Corps is mainly at present the fostering of a sense of military discipline, and the development of physical fitness.

Infantry Training, Volume I, says: "The first and quickest method of teaching discipline is close order drill."

It is clear, therefore, that close order drill should take the first place in the programme of training. But close order drill alone will lead to staleness and loss of interest. Moreover, the men will be found physically unfit for sustained work. Finally, there will be little opportunity in close order drill for the exercise of initiative and leadership on the part of the non-commissioned officers. Close order drill must, therefore, be supplemented by—

1. Physical training; bayonet training (of a simple type); athletic sports; games and boxing to improve physical fitness.
2. Lectures and demonstrations to stimulate interest.
3. Simple field exercises, where the officers and non-commissioned officers have some scope for the exercise of initiative and leadership, and where the men have an interesting relaxation from the dull routine of close order drill and an opportunity of being initiated into the rudiments of military knowledge.

The training of officers needs special attention.

An officer's connection with the corps may extend over many years, and if he never advances beyond the stage of platoon drill he cannot help losing interest in the work. Therefore, although the men of the corps cannot become proficient in anything beyond platoon work, some company exercises must be included in the

programme of training for the sake of the officers and senior non-commissioned officers. In addition to this means, in the 3rd Battalion, University Training Corps, the interest of officers and senior non-commissioned officers is stimulated by holding simple T. E. W. T.'s in the period before camp—(time is not available in camp since officers are required with their companies).

The following programme of work was carried out by the 3rd (U. P.) Battalion, University Training Corps, in the Annual Camp of 1928-29.

PROGRAMME OF TRAINING, ANNUAL CAMP 1928-29.

3rd (U. P.) Battalion, University Training Corps (I. T. F.).

Date.	Parades.	Lectures.	Games.
19th Dec.	Arrival in Camp. 4 p. m. Medical Officer's Inspection.	1700 Officers—Customs of the Army. O. R.'s—Camp Sanitation.	
20th Dec.	0700-0730 Physical Training and Trench Digging. 0745-0845 At the disposal of Company Commanders. 0900-1000 O. R.'s Battalion Drill—R.S.M. (Officers—M.G. Field Firing Demonstration.) 1000-1030 O. R.'s Saluting Drill. 1300-1400 Squad Drill.	1700 Officers—M. G. Characteristics. O. R.'s—Bugle Calls.	1600 Football C.V.A.
21st Dec.	0700-0730 Physical Training and Trench Digging. 0745-0845 Platoon Drill and Rifle Exercises. 0900-1000 Battalion Drill—R.S.M. 1000-1030 Demonstration. Platoon Drill and Battle Drill. (Platoon of 1st Worcestershire Regt.) 1300-1400 Guard Drill.		1600 Football B.V.D.
22nd Dec.	0700-0730 Bayonet Training and Trench Digging. 0745-0845 Company Drill and Rifle Exercises. 0900-1000 Battalion Drill—R. S. M. 1000-1030 Demonstration, Company Drill. Company Battle Drill. (4/19th Hyderabad Regt.). 1300-1400 At Disposal of Company Commanders.	1700 Officers—Anti Aircraft Training. O. R.'s—March Discipline.	1600 Hockey A.V.B.
23rd Dec.	1300 P. T. Competition. 0700-0730 Physical Training and Trench Digging. 0745-0845 Platoon Formations. 0900-1000 Company Drill and Rifle Exercises. 1000-1030 Demonstration—Use of Ground.	1700 Officers—Formations and Use of Ground.	1600 Hockey C.V.D.
24th Dec.	1300-1400 Company Formations. 0700-0730 Bayonet Training and Trench Digging. 0745-1000 Platoon Advanced Guard Scheme. 1000-1030 Saluting Drill. 1300-1400 Platoon Battle Drill. 1400 '22 Bore Rifle Competition.	1700 Officers—Advanced Guards.	1600 Football—Final.

Date.	Parades.	Lectures.	Games.
25th Dec.	0900-1030 Platoon in Attack 1st and 2nd Phases (see Section Leading).		1800 Hockey—Final
26th Dec.	0700-0730 Bayonet Training and Trench Digging. 0745-0845 Battalion Drill—Ceremonial—Adjutant. 0900-1030 Company Advanced Guard Formations. 1300-1400 At disposal of Company Commanders. 1500 .22 Bore Rifle Competition.	1700 Officers—Attack.	2100 Boxing.
27th Dec.	0830-1030 Company Advanced Guard Scheme—Demonstration. 1300-1400 Platoon in Attack.	1700 Officers—Orders in the Field.	2100 Boxing.
28th Dec.	0730-0915 Platoon Attack Scheme. 0930-1030 Company Drill, Ceremonial. 1300-1400 Battalion Drill—Ceremonial—R.S.M. 1300 Officers—T.E.W.T.	1700 Officers—Mechanization.	2100 Boxing.
29th Dec.	0700-0730 Physical Training and Trench Digging. 0800-1030 Practice for Proclamation Parade. 1300-1400 At disposal of Company Commanders. 1400 Long Range Shooting Competition.		
30th Dec.	0700-0730 Physical Training and Trench Digging. 0800-1030 Practice for Proclamation Parade. 1300-1400 Cleaning of Kit and Equipment. 1400 Officers Revolver Competition.		1500 Cross Country Run.
31st Dec.	0700-0900 Practice for Proclamation Parade. 1000 Inspection by G.O.C., Allahabad Brigade Area. 1645-1715 Retreat—Drums and Fifes of 1st Worcestershire Regt.		1300 Sports Heats.
1st Jan.	Brigade Proclamation Parade ..		1400 Battalion Sports.
2nd Jan.	Breaking up of Camp.		

Notes on the Programme of Training.

1. Usually the day was begun with either physical training or bayonet training. The mornings were very cold, and it was felt that some energetic exercise was needed on the first parade. As a variation to add interest, one section from each company was sent daily on this parade to work on a section trench.

2. Battalion drill was begun on the first working day. From the outset, self-control was inculcated by insisting on rigid steadiness on parade and precision in a few simple movements.

3. The demonstrations by the regular troops were brought on as early as possible in the programme to give the corps a definite standard to aim at. These demonstrations were greatly appreciated by the men, and had a marked effect on their work.

4. The daily inspection of lines by the commanding officer was made a special feature of the daily routine. It had the effect of increasing the general smartness throughout the camp.

5. The demonstrations on 23rd and 27th December were carried out by men drawn from companies, after a little coaching the previous day.

6. It will be noticed that practice for the proclamation parade on 1st January began only three days before the parade.

This was considered sufficient time.

The requirements on the parade were :—

- (1) A smart turn out.
- (2) Steadiness at attention (The *feu de joie* was not fired by the corps).
- (3) Precision in arms drill.
- (4) Marching in fours.
- (5) March past.

The first had already been attended to.

The second was insisted on at all times.

The third was practised on all battalion parades.

The fourth was practised every day marching to and from company parade grounds.

The fifth only needed special practice.

The results were satisfactory.

7. The demonstration of field firing by machine guns was unfortunately seen only by the officers, the field firing area being too far away for the men to march to it.

8. Four periods were put at the disposal of company commanders. This allowed companies to carry out revision of work as considered necessary.

9. The T. E. W. T. on 28th December was a battalion attack scheme. It was intended to bring out the problems with which a battalion commander is faced and the necessity for foolproof orders, and to show what standard of training is required in companies to enable a battalion commander to carry out his plan with the minimum of friction. Officers were required to write orders, not as a test, but to crystallise the difficulties. Normally, T. E. W. T.'s carried out deal only with platoon schemes.

Competitions.

The 3rd Battalion, University Training Corps, consists of seven detachments scattered over the United Provinces. Consequently the period in camp is the only occasion available for inter-company competitions. All competitions held in camp are run on an inter-company basis, and a challenge cup is presented for each competition.

These competitions are:—

1. Efficiency cup (turn out, drill, % sick, guards, company lines, strength in camp, conduct).
2. Long range shooting (teams of 8, any rank).
3. Miniature range shooting (teams of 1 Officer and 8 O. R's.).
4. Football.
5. Hockey.
6. Boxing.
7. Cross-country running (teams of 20).
8. Athletic sports.
9. Officer's revolver.

Feeding.

Rations were purchased from the contractor to the value of 7½ annas per man per diem and handed over to companies who made their own messing arrangements. In addition, the sum of annas 3 per man per diem was given to companies as an extra messing allowance.

Each company had one cookhouse for Hindus divided into two, one part for meat-eaters and one for vegetarians. One cookhouse was sufficient for all the Mohammedans in the battalion.

These arrangements proved quite satisfactory.

Sanitation.

A high standard of cleanliness was insisted upon in camp. The medical officer gave much valuable assistance in this respect, as means of disposal of waste water, etc., had to be improvised. The places for feeding were near the cookhouses and well away from the men's lines.

Discipline.

Breaches of discipline were very rare, and none were of a serious nature. Saluting, on arrival in camp, was noticeably slack. However, after the third day in camp, it was impossible for any officer of the corps in uniform or in mufti, or any other officer in uniform on foot or in a car, to pass a man of the U. T. C. in camp, cantonments or city without being saluted. The men's conduct when "walking out" was all that could be desired.

Visitors.

It would be of advantage both to the students and to the university authorities if the latter could see the work of the U. T. C. in camp. Unfortunately, owing to the large distances involved, and owing to the date of the camp, none of the Vice-Chancellors of the five Universities which supply the men of the 3rd Battalion University Training Corps were able to visit the camp. The Brigade Commander, apart from his inspection and official visits, made many unofficial visits, and these undoubtedly stimulated the keenness in their work of both officers and men. The more interest shown by authorities, both university and military, the more will the members of the U. T. C. consider that their work is worth while.

A Criticism.

The programme given is not intended to be anything in the nature of a set piece for the annual camp. The original programme was modified to that given, as it was found that rather too much work was put in; it was not realized that men of the U. T. C. are not accustomed to an open air life, and consequently the work of the first few days proved very exhausting. The hours of work should be

few at first, and may be increased later. Further, it should be remembered that the officers have just finished a session at the university, and therefore a little more relaxation should be allowed than they are given in this programme. Though there were no complaints, it is thought that the officers would have welcomed a little more spare time.

The Result.

The one marked feature of the camp was the keenness of every officer and man of the corps—the result was a definite improvement in discipline, bearing, sportsmanship and “soldierliness”. A few statistics may be of interest to other units of the University Training Corps—

1. Numbers in camp.

Officers, 18 (strength 23).

Other ranks, 503 (strength 629).

2. Average daily sick parade, 1·2.

3. Admissions to hospital, 3.

THE EVOLUTION OF GOVERNMENT IN INDIA.

By

CAPTAIN A. G. FULLER.

Great undertakings have often small beginnings, and three centuries ago, when a small band of merchants, servants of the East India Company, opened factories in Masulipatam and Surat, they inaugurated a movement which was to bring the greater part of the Indian Peninsula within the British Empire. These traders for their own greater security lived together in trade depots, on which their activities were based, and in which their only concern was a prosperous trade and the accumulation of wealth. They were not concerned with problems of government, for the Company possessed no sovereign rights, and local discipline in the depots was maintained by the exercise of common sense and the desire to remain on friendly terms with the natives of the country. Given resources, trade undertakings prosecuted with vigour will expand, and in 1640 when Madras was founded we find the Company undertaking a new responsibility in land ownership, for the terrain on which the town was built was their first territorial acquisition. This brought their servants into closer touch with the people and in course of time, owing to the increase of population which enterprise and successful trade invariably produce, the Company's code of discipline became inadequate, and it was apparent that the establishment of a more regular form of government was desirable. Accordingly, we see the introduction of British ideas of civic government, and in Madras were appointed a Mayor and 12 Aldermen, with representatives of the native elements who lived within the jurisdiction of the trading depot, to carry out the government of the settlement.

The responsibilities of this body were comprehensive enough, for they included the administration of civil and criminal justice; they had the power of local taxation and were bound to maintain a school and gaol. These are small enough in themselves but they mark the beginning of a process of evolution which has resulted in the comprehensive form of government which exists in British India to-day.

At this time the Company had little inclination to extend their territory, and were content with a prosperous and increasing volume of trade, and the system of government in their settlements fulfilled,

in the main, all the requirements of their responsibilities for more than 100 years. Trade then supplied the impetus, and events which supply the main currents of Indian history during this period, made it imperative for them to shoulder additional responsibilities if they were desirous of maintaining their stake in the country.

The chaos arising from the disintegration of the Moghal Empire after the death of Aurangzeb in 1707, the dangerous interference of a powerful French element under the able and unscrupulous Dupleix, and the suppression of English activities in Bengal, which reached its climax in the confines of the Black Hole of Calcutta, determined the Company to make a real bid for supremacy.

A crisis is an opportunity for the man of action and the Company may congratulate itself on the type of men which a sudden check to their fortunes now provided. It is unnecessary to relate here the exploits of Robert Clive and his contemporaries, and the measures they took to restore the prestige of their employers.

The appointment of Warren Hastings as Governor of Bengal, and his activities in the establishment of a sound administration, mark the beginnings of constitutional government in India. Parliament also begins to exercise a measure of control over the activities of the Company.

Lord North's Regulating Act of 1773 introduced a system of council government which comprised the Governor and a council of 4. The provisions of this act were very defective. The Governor had no power of veto over his council, and the opposition which Hastings experienced made his task an exceedingly onerous one.

Pitt's Act of 1784 remedied this defect by reducing the number of Councillors to three and providing the Governor with a veto.

The Charter Act of 1833 however, restored the fourth member, who was to be the law member, and who was only entitled to vote when legislative acts were being considered. He was not allowed to be a member of the Company's service. Lord Macaulay assumed the responsibilities of this appointment and his contributions to the solution of problems of law and education have left their mark on the pages of Indian history. This act made another great change.

It centralized the government of the Company's territories in the Governor of Bengal. Until now the control of this Governor over the other settlements had been very slight, but the legislative powers

of the Bombay and Madras Councils were now taken away and not restored for some 30 years. Further, the Governor of Bengal became Governor-General of India, and the government of that Province became known for the first time as the Government of India.

The reason for this centralization of government was the influx of large numbers of Europeans to the country. The effect of their presence needed careful watching, and a strong central government armed with full legislative powers was considered necessary. This form of Council government remained till the Charter Act of 1853, when the first Legislative Council was instituted. This was nothing more than an enlargement of the Governor-General's Council. It was however to sit in public, the proceedings were to be published, and the Governor-General was given a veto over legislation. The new Council consisted of :—

The Governor-General.

The Executive Council of 4.

Chief Justice of Bengal.

A Judge of the Supreme Court of Bengal.

4 Civil servants from the 4 Provinces of Bengal, Madras, Bombay, N. W. P., who supplied the Governor-General with information in their executive capacity.

As will be seen its members were all officials and no native of the country had a seat.

The Indian Councils Act 1861, remedied this omission and in the light of experience gained as a result of the Mutiny, seats were not only allotted to non-officials but to natives as well. This act further increased the number of official members, restored the legislative powers of Madras and Bombay and set up similar councils in these Presidencies. Acts passed by them however still required the consent of the Governor-General.

Up to this stage there was no thought of the Legislative Councils being elected by popular vote, but in the Act of 1892 this idea was recognized, for the non-official element was increased and their selection placed on a timid elective basis.

Council membership in the Central Council was increased to 24 and comprised the following :—

The Governor-General.

Executive Council of 6 or 7.

6 Nominated officials.

6 Nominated non-officials.

5 Additional members, also non-officials.

This enlargement of the Central Council brought with it an enlargement of functions as well. Opportunity was afforded for discussing the budget and questions could be asked of members of the executive. The introduction of the elective principle, although on a very timid basis, marks the beginning of the process of representation by election. Corresponding changes were made in the Provincial Councils.

The next stage in the development of the government was reached in 1909 with the introduction of the Morley-Minto reforms. They were a most remarkable advance in the development of representative institutions, and were the outcome of discussion with every shade of political opinion in the country. Under this act the Councils became more representative in character, although the elected members represented bodies rather than constituencies of voters. In fact Lord Morley emphatically declared that it was not the object of the Bill to introduce the beginnings of a parliamentary system of Government in India.

The Councils were again enlarged and the membership of the Central Legislative Council was raised to 69, *i. e.*,—

The Governor-General.

Executive Council of 7.

29 Nominated officials.

5 Nominated non-officials.

27 Elected non-officials.

It will be observed that the Council was so composed to give an official majority, and it was the studied intention of Parliament that this should be so. The Council held its mandate from Parliament who were responsible for the good government of the country. This increase in the Council naturally brought with it an increase in functions as well.

Resolutions on the budget were allowed to be brought forward, and a vote could be taken on them.

Members were afforded the additional privilege of asking supplementary questions, and private members had the right to move resolutions on matters of public import, and to have them put to the vote.

One aspect of these reforms however did not meet with public approval, and this was the power which remained in the hands of the officials. Resolutions brought forward were adopted or not according as it suited the Executive and, as a result, the new Councils came in for a good deal of criticism, and the help and advice which they had been led to expect was gradually withheld and discontent arose.

The new Councils had no control over the administration, and this was a very real grievance.

Advice tendered to the Administration by the Council was frequently ignored, and in these conditions the eager would-be co-operator of the Government became an embarrassing critic. This was one of the main results of the Morley-Minto reforms. They created an atmosphere of suspicion which the Indian politician sought very early to remedy.

It now remains to consider the complete change which was made by the latest of the political reforms, which are contained in the Government of India Act, 1919, and the steps which were taken to give India a start on the road to responsible government.

Before doing so it will be convenient to consider the changes which took place in the Home control of the Company's activities, and the circumstances in which Parliament came to take the controlling hand.

The Regulating Act of 1773 left the control of the Company at Home practically as it found it.

In the first place there was the Court of Proprietors, of which all the principal shareholders were members. Working under this was the Court of Directors, 24 in number, who were elected and controlled by the Court of Proprietors.

Pitt's Act of 1784 abolished this system and the control of the Court of Proprietors was transferred to a Board of Control, which represented, not the shareholders, but Parliament. This Board was composed of a President and 5 Privy Councillors, one of whom was the Chancellor of the Exchequer, but in practice the President exercised all the powers vested in the board, which existed only in name. This Board marks the beginning of parliamentary control over the affairs of the Company. It had great powers. It could veto any action of the Court of Directors, control the policy of the Company and issue independent orders to the Governors in India. This resulted in two governing bodies, the more powerful of which represented Parliament, which began to take the controlling hand in Indian affairs.

This arrangement became famous as the "double government" and remained till the Mutiny in 1857, when the complete transfer of the Government to the Crown took place, and the Home Government was constituted on its present basis, *i.e.*, a Secretary of State with a Council to assist him.

This leads us to a consideration of the present constitution. The reforms introduced by the Act of 1909 were disappointing. The Government hoped that in the reformed Councils they would have advisory bodies consisting of the more conservative elements of Indian public life, whose advice would be invaluable and whose support would strengthen their hands. On the other hand the Councils hoped they would be able to exercise some measure of control over the administration.

Both were disappointed. As a result two parties sprang up, the Government party consisting of the official bloc, and the opposition.

It soon became evident that a movement was on foot to press for further reforms, and in 1916 the Reform Party issued a manifesto on the subject of India's future. They said, *inter alia*,

"There is no doubt the termination of the war will see a great advance in the ideals of government all over the world, and especially in the British Empire. What is wanted is not merely good government or efficient administration, but government that is acceptable to the people because it is responsible to them."

In this manifesto we have the first publicly expressed desire for responsible government, that is to say, government by a legislature responsible to the people.

It is noteworthy that the problem was faced by the British Parliament while the Great War was in progress and its issues uncertain; and the historic announcement of the Secretary of State for India in the British Parliament as early as August 1917, indicates the lines on which further reforms were to be considered. This announcement ran as follows:—

"The policy of His Majesty's Government with which the Government of India are in complete accord, is that of increasing the association of Indians in every branch of the administration and the gradual development of self-governing institutions, with a view to the progressive realization of responsible government in India.

I would add that progress in this policy can only be achieved by successive stages. The British Government and Government of India on whom the responsibility lies for the welfare and advancement of the Indian peoples, must be the judges of the time and measure of each advance.....”

There are several things to note in this momentous announcement. Firstly, that of increasing the association of Indians in every branch of the Administration.

Secondly, the gradual development of self-governing institutions, and

Thirdly, the responsibility of the British Parliament for the welfare and advancement of the Indian peoples.

The question of associating Indians in increasing numbers had been a pious hope for many decades. With the increase in education and the development of interest in political affairs it was now becoming possible.

A definite goal, the development of self-governing institutions, with a view to the realization of responsible government in India was indicated.

This paragraph is however couched in conflicting terms. Self-government and responsible government are not synonymous terms. Self-government indicates government carried on free of outside control, such as is now exercised by the British Parliament through the Secretary of State. Responsible government on the other hand means a government responsible to the people who elect it, and in the absence of reforms in the control at present exercised by Parliament, is still possible of attainment. Any policy can achieve one or the other but not both together.

With a view to the realization of the programme outlined in this announcement, inquiry, official and non-official, was made over a very wide field and many schemes were advanced which indicated the lines on which their sponsors considered the end in view could be reached. The scheme which was finally adopted will now be considered.

This is contained in the Government of India Act 1919, which, it is important to remember, is an Act of the British Parliament. The outstanding feature of the constitution granted is the ingenious arrangement known as Dyarchy, in which the Government of the Provinces is vested in a dual control, that of the Governor and his Executive Council, and the Governor acting with his Ministers.

This scheme was only applied to the Provinces, and the Central Government was left unchanged, except for an enlargement of its numbers and functions, which will be considered later.

The reforms separate the Provincial from the Central government in a very definite manner. This was the first step in the devolution of a portion of the government to popular control, and every Provincial Council has become responsible to the electorates which were set up under the act for certain subjects which have been allocated to them. Subjects have been transferred to the control of ministers working with the Governor, and the remainder which, needless to say, are the most important, have been reserved to the Governor and his Executive Council.

In a country like India where Parliamentary Institutions and practices are almost unknown, and political education is the privilege of the few, this method of procedure was very necessary.

The act had to provide for three contingencies at once. First, the institution of means which would provide the necessary political education.

Secondly, the devolution of certain subjects to the popular control, and thirdly, the maintenance of government throughout the period of trial and transfer. Whatever the defects the reforms may be considered to possess, it is difficult to see what other course the framers of the new Constitution could have adopted.

The ultimate object is to hand over all subjects to the control of the Provincial legislatures, and when this has been effected Provincial autonomy will have been reached. This experiment is by far the most important aspect of the Reforms.

In working out the details of this novel scheme of government the first thing to be decided was the subjects which were to be transferred to the control of the Provincial legislatures. It is impossible to note them all here, but the main heads were:—

*Transferred to the Provincial
Legislature.*

Excise duty and liquor.
Local Self government.
Education.
Public Health.
Hospitals.
Agriculture.

*Reserved for the Governor with the
Executive Council.*

Land laws and revenue.
Famine relief.
Irrigation.
Forests.
Administration of Justice.
Police and Prisons.

These became known as the "transferred" and "reserved" subjects.

Secondly, to decide on the proportion of revenue which should be allocated to each portion of this dual system of government to enable it to carry out its responsibilities. This is generally arrived at by agreement, but failing this the Governor may, at his discretion, allocate the revenues by fractional proportions, and this allocation remains in force for the life of the Legislative Council. We have therefore,

The Governor.	
with his Executive Council administering the "reserved" subjects.	with the Ministers, administering the "transferred" subjects.

Normally the Executive Council consists of 2 members, but the statutory limit is 4. One is generally a senior member of the I. C. S. and the other a non-official Indian who has made his mark in public life. The Ministers, on the other hand must be elected members of the Legislature and are 2 or 3 in number. They enjoy the same status as the Members of the Executive Council and usually the same salary.

In practice the Governor has the constitutional right to override his colleagues and his Ministers, who hold office subject to his pleasure and the pleasure of the legislature. This right is exercised in an interesting manner by what is known as the certificate procedure. A member of the Council may bring forward a bill, which is rejected by the legislature. If the Governor is satisfied that it is essential for the safety and good government of the province he may certify it and it becomes law. A Minister may similarly bring forward a bill concerning those subjects of which he has charge, but if rejected by the legislature it cannot be certified by the Governor. In this way popular control is exercised by the elected representatives of the people.

The experiment is confined solely to the Provinces, while the Central government as regards its functions remains unchanged. It has however been considerably enlarged. The Legislative Assembly takes the place of the old Legislative Council. It consists of not less than 140 members, of whom 5-7ths must be elected. It corresponds to our House of Commons at Home. In addition a Council of State

has been created of not less than 60 members, and the idea is that it should be composed of elder statesmen, who act as a revising chamber to the Assembly. This may be compared to our House of Lords. The life of the Council of State is 5 years and that of the Legislative Assembly and Councils 3 years. The Governor-General may dissolve either chamber of the Central Government, and the Governor of a Province may dissolve the local Legislative Council. In the past the Governor-General was the President of the Legislative Council, as was the Governor of the Provincial Council, but these have now the privilege of electing their own President.

A few words as to the position of the Indian States may be appropriate. They have no part in the reform scheme and owe their allegiance to the Crown as the Suzerain. No act of the Indian Legislature is effective in the States and the independence of the Princes remains intact.

Their constitutional position vis à vis the Indian Government is now the subject of investigation, but there is no reason to believe they will ever be subordinated to the Indian Government. The fact that the Viceroy is both the personal representative of the King and head of the Indian Government, has led to some misgivings on the part of the Princes, but there appears to be no reason to believe that the Crown will not continue to exercise its sovereignty through the Viceroy.

It was emphasized in the Secretary of State's pronouncement in 1917 that the progress in the policy of Parliament was to be made by stages, and provision was made in the Act of 1919 for the appointment of a statutory Commission, to enquire into the working of the new constitution from time to time. This brings us to a brief consideration of the Simon Commission. Its composition led to much opposition in India, where it was thought that a proportion of Indians should be included.

This demand seems reasonable enough, but the true facts of the case are apt to be overlooked.

The Act of 1919 was an act of the Imperial Parliament, and what is often forgotten is that "Parliament alone has the power to extend or modify the present Indian system."

It therefore follows that the report on which Parliament is to be guided can only come from a purely parliamentary commission.

The great diversities in creeds, languages and races in India has prevented the unification of the Indian peoples into one single nation, and an adequate representation of all communities would have resulted in an enormous membership, whose efforts would have conflicted with communal requirements at every turn and would have been most unwieldy. The appointment of a purely parliamentary commission seems to have been the only possible practical solution. The task of the Commission may be summarised as follows :—

1. To enquire into the working of the present system of government.
2. To enquire into the growth of education in the country.
3. To enquire into the development of representative institutions in the country.
4. To report to what extent it is desirable to establish the principle of responsible government, or to extend, modify or restrict it.
5. To report whether the establishment of second chambers of the Provincial Legislatures is desirable.

Its report will be awaited with great anxiety by many. The preliminary stage has been passed, the next stage lies in the near future.

COMMISSIONS AND COMMAND

By

CAPTAIN H. BULLOCK.

The most important change which has taken place in the grant of commissions to officers of the army, since the abolition of purchase in 1871, has passed almost unnoticed by the service at large. The only discussion of it known to the writer is an article signed "W.M." in the *Journal of the Indian Army Service Corps* for February 1928, from the pen of one who is an authority on the subject both from its historical and its practical aspects. In his thesis he ranges wide in some directions, but at the same time deals with the subject in a narrower way—as from the standpoint of the Corps from which he has recently retired. It is better to put the matter in less detail here, though on a broader basis, in a journal which has a general professional appeal.

First, as to the forms and issue of commissions to officers of the army. Formerly these varied to the widest degree, according to the recipient's status and the nature of his duties. Some conferred no powers of command at all, some gave unrestricted powers. Everybody and anybody was commissioned, but commissions differed very much in actual value. They were granted to children and to Commanders-in-Chief, to the Drum-Major-General, even. They can roughly be classified as combatant or non-combatant commissions; though no such distinction was officially recognised, and many variations of wording occurred in commissions of either of these two main classes. Formerly what we will call "combatant" commissions were granted only to officers of the Household Troops, Cavalry and Infantry of the Line, and the two "Ordnance Corps"—the Engineers and the Artillery. These conferred both rank and authority on their recipients, whereas all other commissions (such as those issued to surgeons and to officers of the Purveyors Department) conferred some degree of authority but no military rank.

An army officer at one time received a fresh commission with every step in rank; and every regular commission was (and apparently still is) liable by the Stamp Act, 1881, to a stamp duty of 30s. At present this duty does not seem to be enforced. It must also be borne in mind that there were two ladders of promotion open to officers, by *regimental* rank and by *army* rank; and that it was and still is possible for an officer to hold two different ranks at one and the same

time; the first being regimental rank and the second being army rank by brevet.

The fountain of authority being the Sovereign, all commissions were granted under the Royal Prerogative, and thus originally bore the Sign Manual. The commissions of officers of the Engineers (who had received military rank about 1757) and of the Artillery (who had received it in 1751) also bore the signature of the Master-General of the Ordnance. In 1862 the *Officers Commissions Act* was passed, which provided that commissions prepared under authority of the Sign Manual could afterwards be issued without the Sign Manual, being signed ordinarily by the Commander-in-Chief, and a Secretary of State. The signature of the latter was alone necessary on the commissions of chaplains, commissariat and store officers, and adjutants and quartermasters of the militia and volunteers.

An Order in Council made under the same Act, and dated 5th May 1873, set forth the future system in more detail, and also made an end of the practice of commissioning officers afresh at every step in rank. Every person appointed as an officer *on probation* was to be given a commission issued over the signatures of the Commander-in-Chief and a Secretary of State; whilst all first commissions to *permanent* rank were to bear the Royal Sign Manual. If a probationary officer were subsequently promoted to permanent rank, he was to receive a commission signed by the Commander-in-Chief and a Secretary of State. It was definitely stipulated that to officers thus commissioned no further commission would thereafter be issued; an officer being entitled by virtue of his first commission to hold and exercise any rank to which his promotion had been approved by the Sovereign and notified in the *London Gazette*.

During this period of the Cardwell reforms, the practice was started of commissioning various classes of military officials who had hitherto been, rather, civil servants. Thus, in 1855 the officers of the Purveyors Department (who managed the administrative side of the military hospitals) were commissioned: in 1861 the officers of the Military Store Department also received Sign Manual Commissions. At first such commissions conveyed no rank at all, only authority; though sometimes they gave *relative* rank to their holders. An exception is to be found in the case of the Military Train (raised as the Land Transport Corps in 1855), the officers of which were commissioned in infantry pay; but this was a combatant corps,

standing on an equal footing with the Line. By 1914 nearly all non-combatant officers had passed through every stage of their progress towards the acquisition of "ranks" which at least bore the same names as those of officers of the combatant branches, though these ranks did not in themselves empower their holders to exercise any command. The successive stages of the progress from civil servant to full-fledged military officer were usually (1) the receipt of a commission, which later was often accompanied by (2) "relative rank"; this next developed into (3) "honorary rank" or (4) newly coined quasi-military ranks such as "surgeon captain" or "veterinary-major"; culminating in the final bestowal of the substantive military ranks already held by combatants. "Honorary rank" properly so called—e.g., "Quartermaster and Honorary Lieutenant", or "Commissary and Honorary Major"—survived until 1918, when it was replaced (in the few conditions in which it still existed) by a new form of rank to which no distinguishing name has yet been assigned but which is neither "substantive" nor "honorary."

Considerations of space prevent this somewhat involved question of Rank being discussed at greater length here. The question of Command will now be considered—its exercise, vicariously, by the Crown through the instrumentality of the officers of the army. The proposition can be expressed in general terms by the equation.

$$\text{Commission} + \text{Rank} = \text{Command}$$

but in detail the problem is not so simple. Amongst the factors which have tended to complicate it the following may be noted:—

- (1) Rank and Command were formerly closely allied, since Rank was held only by combatants, whose commissions all gave much the same powers of Command. When Rank, whether substantive or otherwise, was granted on varying terms to almost all non-combatant officers complication ensued, since the *commissions* of these officers conferred authority and powers of Command which differed widely in the several corps and departments, but which seldom if ever approached the far fuller powers which were vested in a combatant officer by virtue of the terms of his commission.
- (2) The actual practical usefulness of a commission has greatly diminished. Formerly, if an officer's authority was challenged, he could produce it, duly attested by the Royal

Sign Manual. Nowadays it is unlikely that his constitutional position would be summarily questioned; and if it were, it is also doubtful whether an officer could or would produce his commission from his coat pocket, to use as a weapon to clinch an argument.

In the latter connexion the statutory position must not be overlooked. For many years until recently, the law provided that regulations could be made by His Majesty "as to persons to be invested as officers, or otherwise, with command over His Majesty's forces, or any part thereof, or any person belonging thereto, and as to the mode in which such command is to be exercised; *provided that command shall not be given to any person over a person superior in rank to himself.*" The words in italics were repealed by the *Army and Air Force (Annual) Act* of 1925: and this was the preliminary to the recent changes.

We now come to the important development which occurred in 1927. Briefly, it took the form of (1) removing the actual grant of powers of command from the body of an officer's commission; (2) the issue to officers of all branches of the service (with minor exceptions) a commission of a standardized form; and (3) laying down *in regulations* the varying powers of command to be exercised by officers of different branches of the service.

The new forms of commission were published in the *London Gazette* of 22nd March 1927, in an Order in Council entitled the 'Officers Commissions Order, 1927'; and are three in number, *viz* :—

1. The "standard" commission, to be issued to—
 - (a) "every officer on the active list" on 22nd March 1927 "in the Land Forces, the Royal Marines, or the Territorial Army, who has not before 1st April 1927 received a commission" in the old form.
 - (b) "every officer of any force on first appointment after" 22nd March 1927 "to commissioned rank in any other force";
 - (c) "every person on first appointment after 1st April 1927 to commissioned rank in the Land Forces, the Royal Marines, or the Territorial Army"; and
 - (d) "every officer of the Land Forces not holding commissioned rank in the Regular Forces on appointment after" 22nd March 1927 "to commissioned rank in the Regular Forces";

but it is provided that to the following exceptional classes special forms of commission are to be issued:—

2. Officers of the Royal Army Chaplains Department, who have not been commissioned, or to whom a commission has not been issued, before 22nd March 1927.

3. Persons appointed by His Majesty to an Honorary Rank in the Land Forces, the Royal Marines, or the Territorial Army, who do not hold any other form of commission.

The commission of the first-mentioned class, or “standard” commission as it may conveniently be called, gives His Majesty’s authority to the holder to “in such manner and on such occasions as may be prescribed by Us to exercise and well discipline in Arms both the inferior Officers and Men serving under you and use your best endeavours to keep them in good Order and Discipline. And We do hereby Command them to Obey you as their superior Officer, and you to observe and follow such Orders and Directions as from time to time you shall receive from Us, or any your superior Officer, according to the Rules and Discipline of War, in pursuance of the Trust hereby reposed in you.”

The new chaplains’ commission authorises and exhorts the holder “carefully and diligently to discharge his Duty as” an officer in the Royal Army Chaplains’ Department, “by doing and performing all and all manner of things thereunto belonging,” and closes with the same admonition as the “standard” commission—to “observe and follow such Orders and Directions from time to time as you shall receive from Us, or any your superior Officer, according to the Rules and Discipline of War, in pursuance of the Trust hereby reposed in you.” It will be seen that this commission enjoins obedience, and confers Rank without any powers of Command.

The third form of commission only “gives and grants” the holder “full Power and Authority to have, hold, and enjoy your said Honorary Rank accordingly, together with all and singular the privileges thereunto belonging,” and commands all officers and soldiers whom it may concern to acknowledge the recipient’s rank thus granted. In short, this is a commission which confers only Rank, Honorary Rank, and no question arises of the exercise of any powers of Command thereunder.

The various types of military commissions have, it will be conceded, now been considerably simplified. The only commission regarding which further comment is necessary is the “standard” commission, by virtue of the terms of which, it will be recalled, Command is exercisable “in such manner and on such occasions” as may be prescribed by His Majesty. The “manner” and “occasions” have

accordingly been prescribed in *The King's Regulations*, and will be found at paragraphs 172-181 of the 1928 edition. Of these clauses, paragraphs 173, 174, and 175 are the most pertinent to the present subject. Their effect is to divide the whole *corpus* of the officers of His Majesty's Forces into three categories for the purpose of the exercise of powers of Command. How these classes are constituted will be readily seen from the subjoined table:—

CLASS I (Para. 173).	CLASS II (Para. 174).	CLASS III (Para. 175).
Officers of:— Household Cavalry; Cavalry of the Line; R. A.; R. E.; R. Signals; Foot Guards; Infantry of the Line; Royal Tank Corps; R. A. S. C.; Indian Army; (not being officers in Class III).	Officers of:— R.A.M.C.; I.M.S.; R.A.O.C.; I.A.O.C.; R.A.V.C.; R.A.P.C.; A.E.C.; A.D. Corps; Extra-Regimentally Employed List; (not being officers in Class III).	Quartermasters; Mechanist Officers, R.A.S.O.; Directors of Music; Surveyors of Works, R. E.; Chief Inspectors of Works; Ordnance Mechanical Engineers; Superintending Inspectors of Works; Ordnance Executive Officers; Assistant paymasters; Assistant Ordnance Mechanical Engineers; Assistant Inspectors of Armourers; Inspectors of R.E. Machinery; Inspectors of Works; Departmental Officers of the Indian Army;

EXERCISE POWER OF COMMAND OVER.

(1) All officers junior in rank or in seniority;	(1) All officers junior in rank or in seniority in their own corps or formation;	(1) All officers of their own category or department junior in rank or in seniority;
(2) all other ranks in such corps unless otherwise directed;	(2) all officers of Class III in their own corps or formation;	(2) all other ranks in any corps;
(3) all officers and other ranks of the corps, etc. in Classes II and III.	(3) all other ranks in any corps;	(3) Officers of Classes I and II if specially placed under them.
	(4) such officers of any corps attached for duty to, or specially placed under the command of officers of, the corps or formations in this Class II.	

NOTE.

(1) Officers of the rank of colonel and above, no longer on the strength of any corps, retain the power of command pertaining to the corps from which they are promoted.	(1) Officers of the R. A. M.C., I.M.S., and A. D. Corps further have power of command over all ranks who are patients in military hospitals or are on the sick list and under their professional care.	(1) Officers in Classes II and III will not exercise any military command outside their respective services save only in exceptional emergency, where such exercise is essential to the safe conduct of military operations; when they may be called upon by the senior officer of Class I present to assume command of troops belonging to other corps, etc.
(2) Officers of the R.A.S.C. detailed for barrack duties and detached from regimental duty with their corps, will hold no military command except over officers and men who have been specially placed under their command.	(2) see column III.	

MILITARY NOTES.

BELGIUM.

ARMY REORGANIZATION.

The problem of army reform.

Army reform in Belgium can be grouped under three headings :—

- (a) The Socialist scheme of reducing the late 10 months' service to that of 6 months only.
- (b) The necessity of providing a covering force throughout the year on the German frontier.
- (c) The question of recruiting by regions and the use of one or of two languages (French or Flemish) in units.

The question of the length of service is put first because it is on this sandbank that the ship of state grounded early this year.

Briefly, the Socialists insisted that 6 months' service was (i) essential for the civic, economic development of the country, (ii) sufficient for military training, and (iii) feasible from the point of view of providing the covering force. The General Staff and the Government denied the truth of all these statements.

A special Mixed Commission composed of politicians and leading soldiers was formed in January, 1928, and sat more or less continuously until March studying the whole question of the Belgian military organization and hearing the evidence of leading men, both soldiers and civilians. The evidence before the mixed commission shows two divergent theories of the rôles required by the Belgian army on mobilization and, in consequence, the type of army required.

As a result, Bills for Army Reform were laid before Parliament embodying the proposals of the Government, which consisted of a compromise between the desire to reduce the period of service and the views of General Galet, Chief of the Belgian General Staff. The debate on Army Reform became an endurance test between the Government and the Opposition. The Socialists produced a vast quantity of amendments and employed every political trick in their endeavour to defeat the Government. Owing to these tactics the Lower House had to sit all through what should have been their summer holidays debating these Bills. Eventually, on 17th September, the Bills passed the Chamber of Representatives, and, after a debate of more than ordinary dimensions (3 weeks) they passed the Senate on 31st October, 1928. The two Laws are known as the *Loi de milices* and the "Linguistic Law."

The Belgian Government's solution.

By the Loi de milices the annual contingent is to remain 44,000, who serve :—

2,300	for 14 months.
-3,600	„ 13 „
15,100	„ 12 „
23,000	„ 8 „
<hr/>	
44,000	
<hr/>	

By the Linguistic Law :—

- (i) 2nd lieutenants in the active army must know both French and Flemish.
- (ii) Serjeants and upwards before promotion must pass an examination to show they have a thorough knowledge of the language used in the unit in which they are instructors.
- (iii) Complete instruction of the soldier must be given in his mother tongue, and soldiers speaking the same language must be grouped by companies.
- (iv) All communications between officers and non-commissioned officers must be carried out in the language used in the unit.
- (v) All official documents will be published in the two national languages, printed side by side.

This Law will come into force in January, 1931.

The effect of this Law will be to divide the Army into Flemish and Walloon (French speaking) formations.

COMPOSITION AND EMPLOYMENT OF BELGIAN ANTI-AIRCRAFT DEFENCES.

(Extracted from the *Bulletin Belge* of January, 1929.)

The actual state of anti-aircraft defences in the Belgian army consists of—

- 1 group of 3 batteries (less 1 section) 75 mm. guns (on armoured cars).
- 1 group of 3 batteries 75 mm. guns, tractor drawn.
- 1 group of 3 batteries 75 mm. (semi-fixed).
- 2 batteries of 8 searchlights of 150 c.m.
- 2 batteries of 8 searchlights of 110 c.m.

Additional material is being constructed at the *Fonderie Royale de Canons* which is under contract to produce during 1929 a group of 88/75 mm. guns.

The anti-aircraft material in Belgium being quite inadequate to the requirements of the country, the estimate given is that which is considered to be necessary in anti-aircraft material.

A.—Territorial requirements.

Belgium by its geographical position is particularly exposed to aerial warfare. Her industrial activities (especially on the Meuse) and the density of her population renders her very vulnerable and offers to enemy aircraft numerous objectives of military, economic and political importance.

In 1923 a territorial plan of defence was drawn up, by taking as a basis to work on a list of vulnerable points classified under three categories in order of importance. With a view to protecting each separate category, an establishment of anti-aircraft defences was allotted. The latest allotment laid down, that the requirements, so far as artillery was concerned, amounted to 45 batteries and a similar number of sections of searchlights.

B.—Army requirements.

In order to arrive at a fair estimate of the army requirements in anti-aircraft material, one must know the extent of front which the army will be called upon to protect; also the most important of the vulnerable points in the back areas, for which the army staff will demand protection.

With a group of three batteries each of 4 guns 75 mm. it is estimated that one can insure the continuous defence of from 10 to 15 km. in length and from 4 to 5 km. in altitude.

In foreign countries, *e.g.*, Germany, they allow as a suitable organization 1 group of anti-aircraft guns per division, and 1 anti-aircraft regiment of 2 groups for each army corps.

In France the anti-aircraft formations placed at the disposal of the commander-in-chief are allocated to the general reserve and distributed according to the requirements of the various armies. As regards numbers, it would appear that France will mobilize on a war footing 20 anti-aircraft regiments for her field army, which roughly works out at 1 regiment per army corps.

THE BELGIAN GENDARMERIE.

This organization is a semi-military and civil police force, working normally in conjunction with the civil police, for the maintenance of law and order, especially in times of civil disturbances. In time of war they fulfil an almost purely military rôle.

1. Organization.

The Gendarmerie Corps is under the command of a general and comprises a headquarter staff at Brussels, with a mobile and instructional headquarter legion also at Brussels. This latter formation is called "Légion mobile et d'instruction." There are in addition six territorial groups, whose headquarters are at Brussels, Antwerp, Liège, Mons, Ghent and Namur.

The headquarter staff comprises :—

C.G.S., a colonel.

An assistant C.G.S., a major.

3 assistants, who are either captains or lieutenants.

The following services under the headquarters staff are :—

Medical service.

Veterinary service.

Central administration.

The mobile and instructional legion is under the orders of a colonel and comprises :—

Staff.

2 groups each comprising :—

1 squadron of cavalry.

1 squadron of cyclists.

1 group of armoured cars (machine guns).

1 instructional and remount squadron.

Each of the 6 territorial groups, with the exception of the one at Ghent which comprises a mobile force and 4 companies, consists of a mobile force and 3 companies.

Each of the 6 mobile forces has the equivalent numerically of a small cavalry squadron, and also contains a squadron of machine gun armoured cars.

Each of the 19 companies comprising the 6 territorial groups are divided into three or four districts (61 districts in the whole of Belgium) over each of which a captain is in charge.

Each of these gendarmerie districts is subdivided into gendarmerie brigades in charge of a tract of country comprising a varying number of *communes*.

The minimum number of gendarmes in a brigade is 4, mounted or on foot, commanded by a selected non-commissioned officer.

The total number of such brigades throughout the whole of Belgium is 542.

There is also an inspector-general of gendarmerie, who is a general of the army general staff. At present he is the officer commanding the cavalry corps.

2. *Effectives and personnel.*

Officers—

1 general.

3 colonels.

10 lieutenant-colonels or majors (of which 4 may be lieutenant-colonels).

50 captains.

72 lieutenants or 2nd lieutenants.

3 subaltern officers attached to the staff of the gendarmerie.

1 superior officer detached with the Ministry of National Defence.

1 subaltern officer detached with the Ministry of National Defence.

1 superior officer attached to the King's personal staff.

Total :—142 gendarmerie officers, excluding 6 specialist officers (medical, veterinary and equipment).

Troops.				Mounted.	On foot.
Warrant officers, 1st Class	..	..	..	43	57
Warrant officers, 2nd Class	..	..	..	40	75
1st Grade quartermaster-serjeants (chefs)	..	..	..	62	228
2nd Grade quartermaster-serjeants (chefs)	..	..	..	160	411
1st Grade quartermaster-serjeants	..	..	..	226	176
Other ranks	..	..	..	1,550	3,074
				2,081	4,021
Total				6,102	

The annual pay of the gendarmerie and other ranks as above varies between Frs. 22,500 (£180) maximum for a warrant officer, 1st Class, and Frs. 10,900 (£87) maximum for a gendarme. These sums do not include various allowances such as horses, bicycle, uniform, lodging and marriage allowances.

3. *Instruction.*

The instruction of recruits for the gendarmerie is carried out in the mobile and instructional legion at Brussels, is continued with the mobile force of the various territorial groups, and is gradually perfected during the gendarme's service.

With the mobile and instructional legion there is also established :—

- (a) A school of equitation for the training of non-commissioned officer instructors.
- (b) A preparatory school for aspirant 2nd lieutenants who also have to go through the school of equitation.

The officers.—These are recruited from the ranks of the gendarmerie and from the school of aspirant 2nd lieutenants.

4. *Armament.*

Individual.—The rank and file of the gendarmerie, both mounted and dismounted, is armed as follows :—

Artillery carbine model 1916 with bayonet. Automatic pistol with 7-round charger carried in the butt.

The mounted branches also carry a cavalry sword.

Collective.—The mobile forces of the gendarmerie at Brussels, Ghent, Antwerp, Liège, Namur and Mons, and the cyclist squadron of the 1st Group of the mobile and instructional Legion are in possession of machine guns and automatic rifles.

Moreover, this Legion is supplied with machine gun armoured cars.

According to the organization it should be in possession of armoured cars carrying light guns.

Studies are in progress to supply it with a suitable mortar.

5. *Means of locomotion.*

Horses, bicycles, armoured cars, searchlights on lorries, orries (in case of civil disturbances).

6. *Duties of the gendarmerie.*

The gendarmerie is normally under the Minister of Justice and works in liaison with the civil police. It can, however, work in liaison with the army in the case of civil disturbances. In this latter case, the military formations detached to assist the gendarmerie work under the orders of the latter.

The following are the principal duties performed by the gendarmerie :—

Civil duties.

(a) The patrolling of the country and of the main roads within the country.

(b) The supervision of foreigners, passports, hotel registration, &c.

(c) Repatriation of undesirables.

(d) Supervision of political agitators and other undesirables.

(e) The supervision generally of railway lines and station precincts.

(f) Supervision of soldiers at stations going on, or returning from leave.

Military duties.

In peace time.

(a) Carries out all work connected with the registration of reservists.

(b) All matters connected with the arrest of army deserters and the handing over of them to the military authorities.

(c) All matters connected with facilitating mobilization arrangements, requisitioning of horses, carriages, motor transport, &c., required by the army.

(d) All special missions regarding inquiries, which the army may demand of them.

In time of war.

The gendarmerie is under orders to supply the following troops to the army on mobilization :—

(a) Three light cavalry regiments, one for each army corps.

(b) Four detachments of military police per army corps.

(c) Twelve detachments of military police per infantry division.

Also two detachments for the cavalry corps.

(d) Military police supervision throughout the army.

(e) Military police work on the lines of communication.

Table showing the Armaments of the Gendarmerie and how allotted.

Nature of armament.	In possession of gendarmerie.	Surplus available for gendarmerie.	Units of the gendarmerie in possession.	Remarks.
Machine guns mounted in light armoured cars.	4 cars	..	Armoured car group.	¹ Not yet received.
Guns mounted on armoured cars.	2 cars ¹	.	Do.	² Kept in the army park.
Mortars	4 cars ²	..	Cyclist squadron of the mobile and instructional legion.	³ Detail of grenades—
Machine guns	12	..	6 with armoured car group and 1 with each mobile force.	Mobile and instructional legion .. 5:8
	2	..	With armoured car group.	Mobile Force, Brussels .. 156
	2	..	Do.	" Ghent .. 156
	2	..	Do.	" Antwerp .. 156
	2	..	Do.	" Liège .. 156
	2	..	Do.	" Namur .. 156
	2	..	Do.	" Mons .. 156
Automatic rifles	35	..	5 with armoured car group; 5 with each mobile force.	⁴ Detail of grenades—
	1474 ³	..	Mobile and instructional legion and each mobile force.	Mobile and instructional legion .. 450
O. F. grenades	1350 ⁴	..	Do.	6 mobile forces (as above) .. 150 (each)
Motor lorries	..	12 ⁵	Do.	⁵ On demand from Transport Corps.
Touring cars	..	1 ⁶	Do.	⁶ Do. Do. Do.
Motor searchlight cars	..	2 ⁷	Do.	⁷ Do. Do. Anti-Aircraft regiment.
Wireless sets	..	7 postes ⁸	Mobile and instructional legion and 6 mobile forces.	⁸ Do. Army Staff.

CZECHOSLOVAKIA.

PEACE STRENGTH OF THE ARMY.

The peace strength of the army provided for in the Budget estimates for 1929 is:—

Officers	..	..	10,061
Warrant officers	..	..	8,816
Long service other ranks		..	6,000
Conscripts	..	..	105,506
Civilians	..	..	6,742
Total	..	..	137,119

The number of officers in the higher ranks is still unduly large. There are 2,446 of the rank of major and above, and 4,163 captains and senior captains, compared with 3,452 subalterns.

WEAPON TRAINING.

The 7·92-mm. Mauser rifle appears now to have been definitely adopted in place of the various patterns previously in use.

A new light automatic (Z.B. 26) of 7·92-mm. calibre is also reported to have been introduced. It is stated to be very efficient; its high rate of fire and consequent heavy expenditure of ammunition appears to be its only drawback.

It is intended that all men serving the normal term of 18 months with the colours shall have some practice with a light automatic in addition to the rifle.

FRANCE.

FRENCH AIR POLICY.

Air Minister's views.

M. Eynac, the recently appointed Air Minister, has made two interesting speeches outlining the French Air policy. One was delivered in the Chamber of Deputies during the debate on the Air Budget and the other on 22nd November at a dinner given in his honour by the Air Club de France.

M. Eynac denied that the creation of the new Air Ministry was due to public panic arising out of the death of M. Bokanowski, but was the logical outcome of 10 years' experience. He outlined

the new organization of the Air Ministry. It will be divided into three branches :—

Technical.

Service Aviation.

Commercial Aviation.

As regards the first, he criticised the policy of the past, whereby immense stocks of perishable reserve material were accumulated at the expense of research and technical development. From 1920 to 1928 three milliard francs had been spent on the former, as opposed to 300 million francs only on the latter. He consequently demanded that the original vote of 65 millions for research should be increased to 130 millions, but he agreed to a diminution of 10 millions on the insistence of the Finance Commission. He considered that in the past there had been unnecessary delays in production which in future he hoped to obviate. There were in existence from 30 to 35 firms constructing aeroplanes, many of which were ill equipped. He had approached the *Chambre Syndicale des Industries aeronautiques* with a view to the industry itself reducing the number of such firms. If the *Chambre Syndicale* failed in its efforts, he would not hesitate to take action himself by withdrawing support in the way of subsidies and contracts, thus forcing a number of firms to amalgamate.

He asked for a vote of 10 million francs for industrial plant. He considered it was more important to organize the rapid mobilization of the industry rather than the maintenance of stocks. He fully realized, however, that sufficient stocks should be held at the commencement of a war for use by the services during the initial period of a war.

He emphasised the importance of technical training. A regular curriculum of aerodynamics would be instituted at the Sorbonne. In addition it was proposed to form a national aeronautical school from which would be recruited the corps of aeronautical engineers, but in addition he would collaborate with the Under-Secretary of State for Technical Instruction in order that the *Ecoles des Arts et Métiers* should give training in aeronautical engineering and thus ensure a method of recruiting personnel to be formed into engineer officers.

Service aviation will be placed under one Chief of Staff assisted by two Deputy Chiefs: one of the latter in charge of military aviation and the other in charge of naval and colonial aviation. He considered that the work of the second Deputy Chief consisted not only in military training, but in helping generally in the development of the colonies in such matters as exploration and postal work. He would shortly lay before the Chamber the necessary laws for the formation of service aviation.

The Services would be provided with the necessary number of squadrons that they had originally asked for, namely, 136 for the army, 54 for the navy, and 11 for the colonies—a grand total of 201 squadrons. As regards the naval air service, steps would be taken that the personnel should maintain the same traditions as in the past, and personnel would periodically carry out courses on board ship.

For commercial aviation there would be three companies: the first to join up Paris with the capitals of Europe; the second to join France and her African possessions, with a branch line to South America and the third with lines to the East. The various conventions with the companies will be laid before the Chamber early in 1929.

During the course of the debate the following information of importance was elicited from the Minister for Air:—

- (a) The provision for aircraft wastage in squadrons will be reduced from the original figure of 96 per cent. per annum to 72 per cent.
- (b) The line to Madagascar *via* North Africa would be run in collaboration with the Belgians as far as the Congo.
- (c) The line to Indo-China would continue the British line to the East. From this it may be inferred that the French have no intention of running a line from Baghdad across India.
- (d) In reply to a Communist, M. Eynac stated that the formation of a new Air Ministry did not mean that there would be an increase of squadrons. As regards this point the matter is not quite clear: the Air Minister having already spoken in public of the inevitable growth of the independent air force, and from opinions in aviation circles it can be inferred that an increase not, however, in 1929, will eventually be asked for.

The total amount voted by the Chamber of Deputies was £14,690,147, which was the sum asked for by the Government less £135,000 which the Finance Commission would not agree to.

DEATH OF GENERAL DESTICKER.

The death occurred on 26th November of Général de Division Pierre Henri Desticker, Grand Officer of the Legion of Honour and former Chief of Staff to Marshal Foch. The deceased General was 62 years of age.

Born in 1866 at Avesnes, he was educated at the Polytechnique and received a commission in the artillery in 1891. In September, 1914, he served on the General Staff of General Foch's 9th Army and was afterwards with the same staff when it became "Etat Major, Grope des Armées du Nord."

General Desticker was a very competent and loyal Staff Officer and would go to any pains to work out the details of a scheme given him by his Chief. His association with Marshal Foch only recently ended, when he held the position of Chief of Staff.

CONVOCAION OF RESERVISTS IN 1929.

The 1923 class of reservists will be called up in 1929. The following points are of interest in this connection:—

(a) *Officers*.—All officers of the 1923-24 classes not already called up in 1928.

Reserve officers of the 1925 class of the rank of *sous-lieutenant*.

A certain number of officers of older classes proposed for promotion.

(b) Non-commissioned officers and men of the 1923 class, that is, born in the year 1903.

Non-exercised reservists of the 1920-22 classes.

Non-commissioned officers preparing for promotion of other classes.

Special instructions will be issued fixing conditions for training the native Algerian and Tunisian reservists in 1929.

(c) Arrangements are made for certain dispensations for the above, the following being of interest:—

Reservists who are fathers of at least three living children.

Reservists having during their colour service accomplished at least three months abroad.

Reservists having carried out any active service abroad during their colour service.

(d) Reservists will be called up according to their place of residence in France, Corsica, Algeria, Tunisia, Morocco, Levant or the Rhineland.

(e) The period of training will comprise, including the journey backward and forward, 21 days for non-commissioned officers and men, 25 days for officers.

(f) The period of instruction for 1929 should commence on 8th April, and will be carried out in the cadre of the reorganised army and not that of the army as it exists to-day.

GENERAL STAFF.

By a *decree* dated 17th January, 1929, *Général de Division* Weygand, a member of the *Conseil Supérieur de la Guerre* and Director of the *Centre des Hautes Etudes Militaires* is to be retained on the active list until the age of 65.

ORGANIZATION OF ARTILLERY FORMATIONS.

A decree dated 24th November was published in the *Journal Officiel* of 5th December, 1928, giving the organization of various artillery formations:—

Art. 1.—The divisional artillery for each of the 5 cavalry divisions is to consist of a regiment of 2 groups, each group of 2 batteries.

Art. 2.—Tractor artillery regiments are to consist of 4 groups, each of 2 batteries.

Art. 3.—Railway artillery to consist of 4 groups of 2 batteries.

Art. 4.—Anti-aircraft artillery to consist of 2 regiments of 5 groups, each of 2 batteries. Of these 5 groups, 3 are anti-aircraft artillery and 2 searchlights; also 2 regiments of 3 groups, each of 2 batteries of anti-aircraft artillery.

Art. 5.—Regiments of foot artillery to consist of 1 regiment of 4 groups, each of 2 batteries, and 4 regiments of 3 groups, each of 2 batteries.

Art. 6.—The divisional artillery of the North African divisions to consist of:—

(a) 2 divisional artillery regiments of 5 groups, each of 2 batteries (for Expeditionary Force).

- (b) 3 divisional artillery regiments of 3 groups, each of 2 batteries, stationed in Algeria.
- (c) 1 divisional artillery regiment of 5 groups of 2 batteries, stationed in Tunisia.
- (d) 1 divisional artillery regiment of 5 groups of 2 batteries stationed in Morocco, to consist of 5 groups with a total of 12 batteries, of which 1 is siege artillery and 1 a depot battery.

Art. 7.—The horse-drawn North African heavy artillery regiment of the Expeditionary Force to consist of 3 groups of 2 batteries.

Art. 8.—The Native North African regiment of *Artillerie Portée* to consist of 3 groups of 2 batteries.

Art. 9.—The sound-ranging and flash spotting group to consist of 3 companies.

Art. 10.—The artillery labour formations to consist of :—

A formation of 6 battalions, each of 3 companies.

„ 7 battalions, each of 2 companies.

„ 8 companies.

A north African battalion of 3 companies.

„ unit of 4 companies.

The total establishment of all the above labour units to consist of 169 officers, 7,500 non-commissioned officers and men, of whom 4,730 are French. These to comprise at least 1,340 *militaires de carrières* and 2,770 natives.

ADMINISTRATION OF AVIATION UNITS.

1. A *decree* dated 15th January, 1929, lays down that in principle the departmental services of the army and navy will continue to carry out all administrative work for aviation units—the necessary personnel being lent to the Air Ministry for this purpose. The consequent expenses will be adjusted between the ministries concerned.

2. The above are temporary measures only, and are designed to bridge the gap until the various departments of the Ministry of Air are able to function for themselves.

NOTE ON THE MILITARY BUDGET FOR 1929.

1. General.

The discussions on the budget produced a reduction of about £435,000 on the original estimates. The sanctioned budget amounts to about £50,000,000 in sterling and represents an increase of about

£3,500,000 over that of 1928. This includes a sum of £700,000 for the Eastern frontier defences with an additional large credit to admit of work proceeding beyond the limits actually voted.

For the first time the vote for the Air Force is transferred to the Air Ministry (about £8,000,000). Half the increase is due to measures incidental to the introduction of one year's service ; the remainder is due to the general rise in prices and to defensive measures to be undertaken on the Eastern frontier.

The total base effectives including Air Force personnel amount to 29,152 officers, 513,306 non-commissioned officers and men and 129,602 animals. This shows a diminution in the annual contingent of some 30,000 but the financial saving so caused is counter-balanced by an increase of 500 officers and 8,000 *militaires de carrière*.

2. Budget figures.

The Military Budget was passed by the Senate on 24th December and promulgated on 30th December, 1928.

The main figures are as follows :—

—	War Budget frs.	Compte Spécial. frs.	Total. frs.
(a) Government project ..	6,814,781,140	508,354,280	7,323,135,420
(b) Transferred to Air Ministry.	1,014,870,270	51,554,490	1,066,424,760
(c) Diminution by Chamber ..	47,765,970	..	..
(d) Transferred from Rhine High Commission Budget to Compte Spécial.	..	+1,480,000	..
(e) Voted by Chamber ..	5,752,144,900	458,279,790	6,210,424,690
(f) Diminution by Senate ..	7,141,120	..	..
(g) Budget voted by Senate ..	5,745,003,880	458,279,790	6,203,283,670
(h) Final Amount voted by Senate and Chamber after reference.	5,745,917,450	458,279,790	6,204,197,240

At the present rate of exchange this total amounts in round figures to £50,030,000 (sterling).

TRANSPORTATION AND COMMUNICATIONS.

It is not too much to say that at the end of the war, the French railways were in a state of chaos. Hundreds of miles of their track had been destroyed, very few new locomotives had been built, and

practically no new rolling stock, except that required for the transport of special loads ; lines of minor importance had been neglected or pulled up, whilst main lines were maintained with a bare minimum of attention. In consequence, during the first years of grace, the French railways were operating with worn-out equipment, and with a serious shortage of locomotive power. Of the many engines delivered by Germany under the Versailles Treaty, dozens could be seen at any time standing idle on the sidings around Paris owing to some minor breakdown. Accidents were frequent, in many cases attributable to the lack of proper signalling appliances, the provision of which had been held up during the war. In others, defective rolling stock and track were the cause of frequent derailment. The despatch of articles by goods train always involved a long anxious wait for news of their arrival.

In the 10 years which have elapsed since the end of the war, remarkable progress has been achieved. Partly as the result of the necessity for re-equipment on a large scale, and partly because the French railways only in rare instances run in competition for the same traffic, a central committee was set up in 1921 to co-ordinate the standardization of passenger and freight rates, the placing of joint orders for rolling stock and equipment, and the employment of common goods agencies. Under its direction rapid progress has been made and much waste has been avoided. Above this managing committee is a *Conseil Supérieur des Chemins de Fer* which has been instrumental in directing the general policy to be followed in adoption of standard types of permanent way, standard systems of signalling and continuous braking on vehicles, electrification on a uniform power system, and of all metal coaches.

The value of all the work done in standardizing may be judged when it is realized that in the case of the electrification programme, for instance, 716 miles have already been completed, and under the 1921 scheme, 1,300 additional miles are scheduled for conversion. It may be interesting in this connection to note that on the formation of the Southern Railway in Great Britain, one constituent company, the London and South Western Railway had a considerable mileage electrified on the D. C. third rail system at 600 volts, another, the London, Brighton, and South Coast Railway, had a considerable mileage electrified on the A. C. overhead system at 6,000 volts, while the third constituent company, the South-Eastern and Chatham Railway, although not possessing any electrified mileage at the time

of grouping, was contemplating the adoption of yet a third different system.

The former system, *viz.*, 600 volts third rail D.C. has now been adopted throughout the Southern Railway and all the 6,000 volts overhead A. C. mileage of the old London, Brighton, and South Coast Railway has been converted, or is scheduled for conversion, at an early date.

Since grouping was effected, however, an extension of several miles of the overhead A. C. system was made, only a year previously to the undertaking of the general conversion programme.

To-day, all the main lines and most of the secondary lines have been relaid with standard rails, the heaviest of which weigh about 95 lb. to the yard (the British standard for main lines is bull-headed rail of 95 lb. per yard). Vignoles standard flat-bottomed rails are to be used throughout, but chaired track, similar to that in use in Great Britain, is still in evidence on some of the lines. Locomotive power is now fully up to requirements—indeed, in the Nord “Pacific” type, the “Mountain” 4-8-2 engines of the P.L.M. and the 3,200 horse power electric engines of the Paris—Orleans line France possesses some of the finest locomotives in Europe. When the fact that in the case of the Nord the coal used is relatively poor is taken into account, it must be admitted that some of the passenger train services of the French railways are to-day more than equal in speed to our own best expresses, as the following table shows:—

Daily runs of 100 miles at 57 m.p.h. or over:—

	Miles.	Minutes.	Average speed.
Nord—			m.p.h.
Paris—Lille (Ostend Pullman) ..	156	155	60·4
Paris—Aulnoye (Berlin express) ..	134	135	59·5
Paris—Abbeville (Calais boat train) ..	109·1	110	59·4
Paris—Arras (Lille express) ..	119·4	121	59·2
Paris—Jeumont and <i>vice versa</i> ..	147·8	150	59·1
Paris—Etaples (Boulogne boat trains) ..	140·9	140	60·4
Paris—Calais and <i>vice versa</i> (Blue train) ..	184·3	190	58·2
Paris—Dunkerque and <i>vice versa</i> (Tilbury boat train).	193·9	203	57·3
Est—			
Paris—Chalons ..	107	113	57·0
Paris—Troyes (Basle express) ..	103·3	106	58·5
Midi—			
(Electric) Bordeaux—Dax (Sud express) ..	91·8	99	61·8
Nord—			
Paris—St. Quentin (Berlin express) ..	95·2	92	62·0

To these may be added two trains booked at over 61 m.p.h.

These figures show in a striking manner the improvement in passenger train services, especially on the Nord, which has been brought about. It must be admitted that accidents have been, until recently, fairly frequent, but the steady extension of the block system and of audible signalling on the locomotives, and the wide application of the continuous braking system to goods vehicles will tend steadily to reduce their number. The latter development is being carried out by means of the Dawes scheme and the existing standard 10-ton wagons are being replaced by steel 20-ton wagons.

Progress of electrification.

Electric traction is being developed in four main areas :—

- (i) Paris suburban area (State railway).
- (ii) Paris—Orleans railway (main line) Paris—Vierzon—Brive.
- (iii) P.L.M. Railway (main line) Culoz—Modane and Carnoules—Ventimiglia.
- (iv) Midi railway (main line).

Electrification has been forced on the first-named by the growing volume of suburban traffic (in the rush hours 50,000 persons per hour use St. Lazare station alone) and by the existence of tunnels, notably the Meudon tunnel on the Versailles line, which made steam working of an intensive service extremely difficult. The following sections are already electrified :—

St. Lazare—Colombes and St. Germain.

Invalides—Versailles with the loop line connecting St. Lazare with the Invalides.

The third rail system is in use working at 650 volts D. C., but provision is being made for the later locomotives to work at the standard 1,500 volts D. C., if and when the main line electrification is taken in hand.

Power is being obtained partly from special power stations and partly from public sources of supply.

The Paris—Orleans railway which originally worked the short line from the Gare d'Austerlitz to the Quai d'Orsay with electric traction and subsequently electrified its suburban line to Dourdan, is now working on a main line electrification scheme comprising 600 miles of route (to be extended ultimately up to 2,000 miles). The Paris—Vierzon section was opened for traffic at the end of 1926 and work is now proceeding on its extension to Brive. The next

step will be the electrification of the important branch lines to Gannat and Clermont-Ferrand. The overhead system is employed and power is derived partly from a public supply company (Paris end) partly from water-power stations at Eguzon (15,000 h.p.) and the recently opened station at Coindre (13,000 h.p.).

The P.L.M. railway ultimately proposes to electrify 2,000 miles of line and work is already proceeding on the Culoz—Modane section which, owing to the heavy loads and steep gradients, is a difficult proposition for steam working and hydro-electric power is close at hand. Some delay has, however, been caused by the experiments which have been carried out to find the most satisfactory system of regenerative working (i.e., recuperation of current when the train is descending the gradients). The third-rail system is being installed. The next stretch of line to be electrified will probably be the Riviera section from Carnoules to Ventimiglia across the Italian frontier.

The Midi railway was the first line to adopt electric traction owing to the proximity of water power, the long distance by sea for supply of coal, and lastly the constant forest fires occasioned by sparks. Originally on the single-phase system, using current at 12,000 volts it is now being brought gradually into line with the standard system. In addition to the two main line stretches

Bordeaux—Hendaye (146 miles)

and

Toulouse—Bayonne (201 miles)

the Midi is electrifying nearly 700 miles of route in the next 5 years. The equipment is to be mainly provided by deliveries in kind from Germany. Included in this programme is the new line Toulouse—Ax-les-Thennes—Puigcerda, giving a through connection to Spain.

This extended use of electricity on the French railways, hitherto excellent customers of Great Britain for coal, will very seriously affect our coal trade. The annual saving on the Midi railway alone must by now approach 200,000 tons per annum, and the total saving was officially put at 500,000 tons out of 12,000,000 in 1928.

International communications.

The following is a summary of recent developments :—

(a) *Communications with Italy.*—The transalpine line from Nice to Coni (75 miles) was opened in September, 1928, to facilitate traffic between Turin, Milan, Switzerland and Central Europe.

(b) *With Spain.*—Two lines both representing considerable engineering feats have been opened through the Pyrenees.

(i) *West.*—Bedous to Camfranc (July, 1928). Shortening the distance between Bordeaux, Dax, Pau, &c., in south-western France and north-western Spain.

(ii) *East.*—Ax-les-Thennes to Puigcerda (to be opened 1929). Shortens the journey between Paris or Toulouse and Barcelona, and towns in eastern Spain, by about 67 miles.

(c) *With Alsace Lorraine.*—The Vosges line which shortens by 54 miles the journey from St. Die to Strasbourg. It will be remembered that owing to their having formed a part of Germany, rail communications with Alsace-Lorraine are still in need of development, especially as the railways will be of strategic importance.

Development by railways of road transport.

At the same time that British railways are asking Parliament for powers to work road services, it is interesting to see that French railways are creating auxiliary road transport companies under their own control. Better situated, owing to the long distances between large towns, to fight road competition with their main line services, the French railways feel it acutely in the country districts where it does not pay to maintain a good service and road transport is better than a poor rail service. Consequently, the branch lines in sparsely populated districts will very probably disappear in favour of road motor service worked by these auxiliary companies.

The P.L.M. and Midi railways have had an auxiliary road motor service of considerable scope in operation for some time, the former covering an itinerary of 6,400 miles, whilst the Paris—Orleans railway carried 34,300 persons by road in 1927.

Existing services have however been almost entirely for carriage of passengers to health resorts, and places of historic and scenic interest, and the wide extension of the scheme to carry goods is a new departure.

CANTEENS.

The following official instructions have been issued by the French War Office :—

Every unit should have its own non-commissioned officers mess ; if this is impracticable arrangements should be made to share a mess with the non-commissioned officers of another unit. Should the

institution of a mess be impossible, arrangements should be made for the non-commissioned officers to be fed by the canteens.

The prices should be fixed by the colonel who should also organise a recreation room for his men.

The canteens are let out under contract to ex-soldiers who are obliged to follow their units to camp or to their new barracks should there be a change of station.

The prices are to be fixed by a committee consisting of the commanding officer and two officers. Only light wine, beer and cider are to be sold. Spirits and aperitifs are strictly forbidden. Small objects of general use can be sold, but no government clothing or equipment. No credit is to be given.

The canteen is to be under the supervision of the commanding officer who, with the assistance of the medical officer of the unit, is responsible that the goods sold are of good quality.

In case of any disturbance the canteen can be shut at any time by the captain on duty.

The canteen proprietor may not be a member of any trade union; he may only own one canteen which he must run personally, he cannot appoint an agent to do it for him. If he supplies goods of bad quality, the canteen can be put out of bounds for a short period. In the event of the canteen continuing to be unsatisfactory, the canteen proprietor can be dismissed, but only after the authority of the Ministry of War has been obtained.

NOTES ON MILITARY REVIEWS.

“REVUE MILITAIRE FRANÇAISE.”

November, 1928.

Published by Berger-Levrault, Paris. Price, 5·50 francs.

1. *Co-ordination of Fire and Manœuvre.* Part 1. By
Général de Barbeyrac de St. Maurice.

A most interesting article urging the importance of the infantry making full use of their weapons in attack just as much as in defence. The writer argues that it is just as important for the infantry as for the artillery to make a definite fire plan, and without such a plan real liaison can never be attained. He points out that liaison is as dependent on methods and means of fire as on good communications.

In exercises with or without troops, as in war, the main problem is always how to help the infantry ; the answer almost invariably is to call on the artillery, with the result that the latter are given more tasks than they can possibly carry out effectively, and they only succeed in sprinkling their targets with fire instead of blotting them out. Why should not the infantry sometimes help themselves ?

At present infantry fire (*i.e.*, rifle or machine gun) is usually direct, and practically speaking is only put down by the firing "line," *i.e.*, the leading troops and machine guns. Consequently, if greater density of fire is required, the usual way of producing it is to increase the number of men in the firing line. These men, lying flat, can only see a short distance ahead, and if fire is wanted at a greater range than 200—300 yards the artillery are called on.

Technically, rifles and machine guns should be able to take on any weapon which is not in a gun pit and has not got a shield ; to use artillery for these targets is waste of power.

The author maintains that as infantry instruments are still rather primitive and the support of an attack by indirect fire requires a good deal of calculation, such action is held by most infantrymen to savour of "gun busting" and to be impracticable. In the defence on the other hand, a definite infantry fire plan is made, and the artillery plan is then fitted in with it.

With improvements in instruments and methods this should be equally possible in the attack.

The writer suggests that when contract is first made, the artillery should be the first to open fire and that under protection of this fire infantry weapons should advance to effective range. He pictures artillery using their fire to point out targets in the forward zone to the infantry, who immediately swamp the target in a stream of bullets. The author does not indicate how the artillery are to locate these targets.

2. *Passage of Rivers in Face of the Enemy.* (Part 5.) By Colonel Baills.

In this last instalment the Austrian advance and subsequent retreat across the Piave are described. The author then gives in detail an account of the bridging operations on each divisional front.

He draws the following lessons :—

- (a) Artillery fire must be put down on a front considerably broader than that of the actual attack.

- (b) The attacker must establish real superiority of fire and mastery of the air.
- (c) Reserves of both R.E. personnel and material must be very great.
- (d) Where there is a strong current the protection of the bridges from damage by floating wreckage is of paramount importance.

December, 1928.

1. *Co-ordination of fire and manœuvre. (Part II.)* By General de Barbeyrac de St. Maurice.

The advance of the 37th Division on 8th August, 1918, is described in detail, showing how the efficient handling of one machine gun company using indirect fire, enabled a whole division which had been hung up for some hours, to continue the advance and capture the village of Plessier. A description is then given of what might have been done both on 8th August and in the subsequent fighting on 9th August, if all the machine guns in the division had been properly handled.

In order to provide the volume of fire demanded by modern conditions, the writer advocates the creation of a fourth machine gun company for each regiment and the provision of 12 mortars and 4 or 5 guns per regiment as weapons of accompaniment. This increase of weapons must not entail a loss of mobility; mechanisation is therefore necessary, and at least 25 cross-country motor vehicles per regiment must be provided.

2. *Protection of Tanks in Battle.* By Captain Perré.

This subject is approached from the point of view of whether the services rendered by tanks are proportionate to the expenditure involved in their protection.

During their movements to the starting line little beyond the employment of low-flying planes is necessary to protect their approach.

The author considers that during the actual battle, if liaison is good and the infantry and tanks work well together, very little fire is required for the tanks alone, apart from that put down to help on the infantry.

Interesting and, for the Royal Tank Corps, cheering figures are given showing the probability of a tank being hit when going through a barrage.

GERMANY.

GERMAN ARMY.

Career of candidates for commission in combatant units.

As Germany possesses no cadet schools corresponding to the Royal Military Academy, Woolwich, or the Royal Military College, Sandhurst, candidates for commission have to serve in the ranks for a period of from four to six years; the time depending on certain educational qualifications.

They report to the regimental commanders of the units they wish to join during the normal recruiting period of 1st April to 1st October. The regimental commander, after a careful examination of each individual case, selects those he considers most suitable, and forwards their names and full particulars to the Ministry of Defence. In January candidates are informed whether they have been selected or not. The selected candidates enlist into the Reichsheer as ordinary privates on a 12 years' engagement.

Candidates in possession of the leaving certificate of a "higher school with 9 classes" undergo training according to the following table:—

1st year.		
3 months	..	With regimental training unit.
9 months	..	With regiment in the ranks.
2nd year.		
3 months	..	With regiment in the ranks. Junior ensigns examination and promotion to junior lance-corporal.
3 months	..	With regiment in the ranks as lance-corporal.
6 months	..	Infantry training school 1st course. Promotion to under officer.
3rd year.		
6 months	..	Infantry training school, continuation of 1st course. Ensigns examination and promotion to ensign.
6 months	..	Training school of candidate's own arm. 2nd course.
4th year.		
6 months	..	Continuation of 2nd course. Officers examination and promotion to senior ensign. Service with troops. Election as officer. Promotion to 2nd lieutenant.

Candidates not in possession of the necessary higher school leaving certificate, cannot take their junior ensigns examination until their fourth year. In the meantime they have to pass certain examinations on general subjects, for which they have to prepare by themselves, though the educational personnel attached to units have to give them any help and advice they can.

As soon as they have passed the junior ensigns examination they continue the course as laid down in the above table, completing it in their sixth year of service.

ITALY.

SITUATION IN LIBYA.

About the end of November a strong band of Senussi raiders from the Harugi Mountains (immediately south of Zella) appeared near the camps of the submissive Arabs around Marsa Brega and drove off nearly all the livestock. The Government authorised these Marsa Brega Arabs to go in pursuit and they caught up the rebels at the Harugi Mountains and inflicted heavy losses on them, taking 800 camels, some arms and a few prisoners, with whom they returned to Agedabia.

On 8th December another band, also from the Harugi Mountains, made a raid near Agedabia and carried off some livestock. They were counter-attacked by Eritrean troops, who recovered the livestock and inflicted losses. The Eritreans lost 5 killed and a few wounded.

On 20th December Italian troops at Sahabi encountered a rebel band coming up from the south to join the rebels in the Jebel. The rebels were defeated, losing 60 killed. Following this a sweep of the Jebel was carried out, and ended with an encounter in which the rebels lost 22 more killed.

The 15th Eritreans and the 2nd Armoured Car Squadron then pushed on south, as early in January a strong band of about 500 rebels had been reported as making for the Jebel from Cufra. At the same time the 16th Eritreans were placed in lorries and, with a section of armoured cars and a camel corps squadron, were hurried to head the rebels off; this latter force encountered the rebels early on 20th January at Bu Atla (just north of Gialo). After 4 hours fighting the 15th Eritreans, with their armoured cars, came up in rear of the rebels, who were severely defeated, losing 226 killed, 173 rifles, several prisoners and many loaded camels, tents and material. The pursuit of the fugitives is being vigorously carried out. The Italian losses were 1 lieutenant of the 16th Eritreans, 12 native troops killed and 21 wounded.

The series of actions are interesting because they show that, while the residents in the occupied zones may have submitted, the Senussi to the southward have not done so.

On 24th January the new Vice-Governor of Libya, Colonel Siciliani; and the new commander of the troops in Cyrenaica, Major-General Ronchetti, arrived in Benghazi.

TREATY WITH THE VATICAN. .

There were signed in Rome, on 11th February, two treaties by which the long outstanding dispute between the State and the Church has been brought to an end.

The dispute dates back to 1860, when the Pope was deprived of his States and temporal power by the Italians. Thereafter the Pope still considered Rome as being under his sovereignty. In 1870 the Italian Government confined the Popes possessions to the Vatican, which, however, was held to be Italian territory. Pius IX refused these terms and General Cadorna captured Rome after a nominal resistance by papal troops. Ever since successive Popes have refused to accept the Italian Government view of the situation.

The terms of the treaties have not been published, but their general purport has appeared in the Press. From the military point of view it is important to note that a clause of one of the treaties declares that the Vatican wishes to remain, and will remain, extraneous to the temporal competitions between other states as well as international congresses convened for this purpose unless the parties in conflict appeal unanimously to it to intercede; it reserves the right in any case to the exercise of its moral and spiritual power.

By this agreement Mussolini has gained the support and benediction of the Church, which otherwise might have developed into an enemy who could at least embarrass the progress of Fascism, for divided opinion on the Roman question might weaken the party. To what account the political advantages of this alliance will be turned it remains to be seen. There is little resemblance between the Papal State of to-day and that of the early 19th century. At that time the Pope, with his comparatively large possessions, was as much a temporal power as any other Sovereign, and as such was drawn into the political arena of Europe; in fact, in 1806 Napoleon, in order to further his European blockade, asked the Pope to close his ports to the Protestant British. This the Pope refused to do, resulting in his breach with Napoleon, and in consequence his lands were given to Italy and he was made a prisoner at Savona.

The treaties will put an end to such causes of friction as that recently in evidence over the Catholic Boy Scout movement. This movement was a purely Catholic institution, and was part of what is known as the *Azione Cattolica*, which was a Catholic organization

for the training of youth. Mussolini, who realized the importance to Fascism of having complete control of the education of Italian youth, by a decree of 9th April, absorbed the Catholic Boy Scouts into the *Balilla*. Now that diplomatic relations have been resumed with the Italian Government, there is no doubt that such abrupt measures will no longer occur, but friendly discussions will take place over any differences that may arise.

The French fear that the power of the Vatican may be thrown in on the side of Italy in the many spheres in which French and Italian prestige are struggling for supremacy. They are also apprehensive that the French missionary settlements in parts of Asia and Africa may now appeal to the care of Italy rather than to that of France.

It may be said in conclusion that Mussolini has eradicated an embarrassing situation which has lasted since 1860, and concluded treaties for Italy which have made her politically a stronger nation.

THE TRAINING OF YOUTH IN ITALY (*Balilla* AND *Avanguardisti*).

The greatest attention is being paid in Italy to the training of boys and youths, not only from a physical and military, but also from a mental and political point of view. The object is to inculcate the spirit and precepts of Fascism in order that they may be so firmly engrained in the minds of all that future generations will be imbued with the same ideals and political thought, and no dissentient voice will be heard.

In order to put this project into effect a system of training, under the personal supervision of Mussolini, has been instituted throughout the country. Its history and organization are as follows:—

In the early part of the year 1926 a Royal Decree was published placing the pre-military training of the youth of Italy under the direct care of the *Milizia Volontaria per la Sicurezza Nazionale* (M.V.S.N.) or National Militia. In each province the chief town has a "Provincial Committee"; in each commune there is a "Communal Committee," and in the great cities each quarter has a "Regional Committee." The committees are composed of a president and members, the number of the latter depending on the size and importance of the locality, but all are Fascists. Their duties are to foster the movement and to enrol members. The title given to this organization is *Opera Nazionale Balilla* (O.N.B.). It is financed by an annual government grant of 1,000,000 lire and voluntary contributions.

Enrolment is voluntary and requires the consent of the parents. The advantages obtained by a boy who joins the *Balilla* are, however, considerable, both in his scholastic career and in after life, and for this reason the numbers enrolling are rapidly increasing.

The boys are divided into two classes : those between the ages of 8 and 14 are called *Balilla* (lit. " those who are fostered "), and those from 14 to 18 *Avanguardisti* (the vanguard).

Military formations are adopted on the model of the M.V.S.N., i.e.—

A *squadra* consisting of 11 boys.

A *Manipolo* consisting of 3 *squadre*.

A *Centuria* consisting of 3 *Manipoli*.

A *Coorte* consisting of 3 *Centurie*.

A *Legione* consisting of 3 *Coorti*.

Instruction.

The education of the *Balilla* and *Avanguardisti* comprises physical training, fencing, athletics, football, riding, rowing, ski-ing, camping, drill, shooting, &c., particular attention being given to obedience, discipline and a strong development of the Fascist spirit.

Particular attention is paid also to the health of the boys, medical attention and medicines being supplied free of charge. In cases where special treatment in a public nursing home is required, the expenses are defrayed out of the funds of the O.N.B.

The instructors are specially selected for their ability to impart knowledge and before taking up their posts generally do a two-years' course of training and physical culture. At the chief naval ports the *Balilla* units receive instruction of a naval character.

Balilla houses.

In most of the big towns throughout the country "*Balilla* houses" have been built or acquired for the purpose of providing covered halls for physical training, drills, lectures, &c., and in which the committees can hold their meetings and deliberations.

Relations with the Army.

The boys, both *Balilla* and *Avanguardisti*, wear a uniform very similar to that of the National Militia, i.e., black shirt and cap, grey-green knickerbockers and puttees.

On ceremonial occasions, parades, &c., a place is invariably allotted to the detachment of the local *Balilla* and they are under the Ministry of War for their rules and regulations regarding drill, training, &c.

Conclusion.

Apart from the normal Boy Scout principles of healthy development of mind and body for the youth of the country, and a high sense of patriotism, discipline and duty, this Italian system aims at instilling from the earliest childhood doctrines of Fascism in its most potent form. In three years the numbers enrolled have risen to over one million, and in a few years most of these boys will be serving in one or other of Italy's fighting forces. At the present time it is no longer possible for an adult man to join the Fascist Party, the object being to keep out lukewarm adherents so that now the only way to become a Fascist is to begin from early boyhood and gradually work up through the *Balilla*, *Avanguardisti* and Militia process. In this manner the Italian people of the future will be a nation composed very largely of true and ardent Fascists.

Apart from the great increase in the support likely to be given to the Fascist Party, and the consolidation of the hitherto rather volatile Italian people, the *Balilla* and *Avanguardisti* organizations have already resulted in a direct improvement of the value of the Army. Thus, whereas formerly recruits joined absolutely raw, it is the exception even to-day for men to be called up who are not already expert in the handling of their weapons, and in many other matters of military training. In consequence during the period of service with the colours, the conscripts can reach a far higher state of training than formerly.

Comparison with similar systems in Great Britain, U. S. A. and Japan.

Great Britain.

The Italian organizations correspond with the Boy Scout and Church Lads Brigade movements, and to a less extent with the Officers Training Corps. They differ from the British organization in that the Italian organization deals with the training of youths from their earliest years right up to the time of military service, whereas in Great Britain boys may or may not belong to any of the three organizations referred to, but it differs most particularly in the

political control. The British Officers Training Corps scheme is designed to train the future leaders of an Army, and has a comparatively restricted application. The Italian scheme aims far more at training the rank and file. As will be seen the officers of the future are not particularly helped in Italy ; it is open to question whether it is more important to have a system which ensures the leaders being thoroughly grounded as in our Officers Training Corps, rather than one in which the rank and file join the colours knowing the elements of drill, tactics, and military science generally, as in Italy.

U. S. A.

The systems in the United States for training juveniles resemble in many ways those of Great Britain. They differ from Great Britain in having 40 essentially military schools at which military training is compulsory, and where students wear uniform. But apart from these schools, which do not cater for a great many individuals in proportion to the size of the nation, the Officers Training Corps at 184 colleges and universities corresponds in its aims and objects very closely with the Senior and Junior Divisions of the British Officers Training Corps. The United States thus aim very much, as Great Britain does, at the training of the officers of the future.

The U. S. A. also has an extensive Boy Scout movement, some 800,000 strong, which does not link up with the other systems of juvenile military training.

Japan.

The system of training youths in Japan differs both from the British and American systems on the one hand, and from the Italian on the other. It is only of recent origin, the principal schemes having been inaugurated in 1925 and 1926.

In Japan in all primary and secondary schools the syllabus has always included some military training, such as drill and fencing. Since 1925, military training has been intensified in secondary schools (for boys over 14 years of age) ; but this scheme applies only to some 10 per cent. of the boys of the country. It resembles the attempts of Great Britain and the United States to cater principally for the training of future leaders.

In 1926 a further scheme was evolved by which the 90 per cent. of boys who only attend primary schools, *i.e.*, the future rank and

file, should be given military instruction at training centres in all parts of the country. Both these schemes are compulsory, military training being as much a part of the school curriculum as geography or history. In both schemes those youths who pass their military course satisfactorily can, if conscripted, have their colour service reduced. The Japanese idea, therefore, would appear to be to teach future leaders, and also to train the remainder of the nation as far as possible in the military virtues.

Summary.

Compared with these other nations it is clear that Italy's system of juvenile military education is the only one which is directly controlled by, and worked in the interests of, one particular political party in the State, though it is true that this party and the State have almost become synonymous terms. The Italian system is in theory voluntary, but in practice it will probably prove almost compulsory for the boys and youths of Italy to-day.

The other main feature about the Italian organization is that it aims at training the rank and file rather than the future leaders. The reason for this is probably political rather than military.

JAPAN.

ENTHRONEMENT OF H.I.M. THE EMPEROR OF JAPAN.

The principal enthronement ceremonies of H.I.M. the Emperor took place at Kyoto, between the 10th and 18th November, 1928. At the conclusion of the ceremonies the Emperor returned to Tokyo, where a large military review was held in the Emperor's presence on 2nd December. Two days later, H.I.M. attended a naval review at Yokohama, at which British, French and American warships were present, in addition to practically the entire Japanese fleet.

In connection with the ceremonies at Kyoto there was no martial display; the only troops seen other than those normally stationed in Kyoto were a regiment of Guards on duty at the Palace and a contingent of sailors, representing the Navy. But although nothing of direct military interest occurred, certain aspects of national feeling and temperament which are of interest to the military student, were brought strongly into the limelight.

The ceremonies hinged upon two supreme functions; the first, the Announcement, itself of a dual nature; a religious ceremony in the morning at which the Emperor makes the announcement to the

Imperial Ancestors, and a second occasion, more in the nature of a State ceremony, in the afternoon, at which the Accession is announced to the people and an address received from them through the lips of the Prime Minister.

The second supreme function was the rite of the New Food Offering, at which the Emperor holds personal communion and partakes of a meal of consecrated food with the Imperial Ancestors.

Full descriptions of all these ceremonies appeared at the time in the daily papers and it is unnecessary here to trace their complicated origins and inner significance. They presented, however, a rare opportunity to study some of the psychological ideas of the people, which are of interest to the military student. The ceremonies themselves are survivals from the remote past, and constitute one of the oldest rituals which are still practised in the modern world.

Perhaps the greatest impression made on the foreign observer was that of the consummate artistry with which the Japanese succeed, in these modern times, not only in keeping alive, but in maintaining as a vital force in their national existence, the most ancient and apparently anachronic traditions of their race. To the physical senses this artistry was expressed in the beautiful proportions and symmetry of the buildings, the pleasing colour schemes and the rather wistful music of ancient reed instruments, which combined to make a perfect setting for the mysterious rites which were taking place. Although they were not so perceptible to the foreigner, there can be no doubt that the mental and spiritual re-actions on the Japanese were at least as strong as the physical. The words attributed to the Premier on leaving one of the ceremonies must equally apply to the majority of Japanese who were in attendance and also to some extent to the whole nation : " I felt as though I had been transported into our ancient and glorious Yamato (Japan) which we all know and love so well in our hearts." The occasion has thus given a strong impetus to the feeling of nationalism and unity which is always a marked characteristic of the Japanese.

The second impression was derived from the clever juxtaposition of purely mundane ceremony and spiritual rites. Thus, at one of the principal ceremonies the Emperor announced to his people the fact of his assumption of the throne ; at the next he is closeted alone at the dead of night and in archaic surroundings in personal communion with his Imperial Ancestors, who constitute the Shinto Gods,

Here is clear recognition of the dual capacity of the Emperor ; on the one hand the human ruler, on the other the cadet of the godly household, able and willing to intercede on behalf of his people. The effect is to emphasize both the sanctity of the Emperor's person and his position as the inspired father and leader of the nation. It is an established fact that the proportion of the Japanese population that is loyal to the throne is very nearly 100 per cent., and there is no doubt that it is largely upon such ceremonies as these, that the Japanese authorities rely in their endeavour to maintain this high standard of loyalty and patriotism.

It will be understood from the foregoing that the enthronement in Japan is by no means limited to a service of prayer and thanksgiving, or to a royal ceremony. The occasion serves also as an act of revival of Shinto faith through which the loyalty of the people is focussed on the throne.

The cost of the enthronement ceremonies was in the neighbourhood of £2 million, a considerable item in the Japanese budget. On the other hand, the Japanese authorities no doubt regard the money as well spent, in view of the psychological effect of these ceremonies in reinvigorating the patriotic sentiments of the nation and in unifying all classes in loyalty to their Emperor.

MOROCCO.

SPANISH ZONE.

Affairs in Rio de Oro.

The following is a report made by the Finance Commission of the Budget, 1929, in the French Senate on 14th December, 1928 :—

We cannot be indifferent to events which, although not actually occurring within our colonies, are nevertheless closely connected with the existence of the latter. In this category we must include, in particular, the incidents which have, for some time, attended the air communications established between the home country, Morocco and French West Africa.

The circumstances will be present in all our minds. Let us recall them in a few words :

(a) On the 21st December, 1925, the pilot Reine flying from Agadir to Cape Juby, experienced some engine trouble and was forced to land in the S'Bouia zone, forming the Spanish enclave of

Ifni. He was immediately arrested. As soon as particulars of the place where he had landed were obtained, our intelligence officer at Tiznit immediately opened negotiations with the Kaid of the region. On payment of a ransom, M. Reine was brought back to Tiznit on the 26th December, 1925.

(b) On the 22nd May, 1926, the pilot Mermoz, carrying the mail to Dakar, was overtaken by mist in the Ifni region, and could not locate Cape Juby. As he had no more petrol, he landed about 50 km. south of Juby. It was particularly difficult to trace him, because the aeroplane escorting the missing pilot had seen him descend in a cloud pocket near Ifni, and consequently searches were carried out in this region. For several days M. Mermoz did not know exactly where he had landed. He was captured by the Moors and handed over to the Spanish Governor of Cape Juby on the 27th May, on payment of a ransom of 1,000 pesetas.

(c) On the 17th October, 1926, the pilot Pivot, carrying the mail from Agadir to Dakar, was forced to land in the Ifni region, not far from the point where the pilot Reine had come down the year before. He happened to be escorted by another aeroplane piloted by Reine.

As soon as M. Reine saw his companion land and realized that he could not follow him in that neighbourhood, he informed the commander of the French annex at Tiznit. Negotiations were immediately started through the agency of the Kaid of the region and a few days later Pivot was released.

(d) On the 11th November, 1926, two aeroplanes were flying in company piloted respectively by the pilots Gourp and Erable, the latter being accompanied by a mechanic named Pintado, of Spanish nationality and an interpreter. Owing to a breakdown, one of the aeroplanes landed in the region of Cape Bojader; the escorting aeroplane landed beside it but when, having transferred the mail, the pilot attempted to start he found that he could not take off. At this moment, two armed Moors, one of whom was O Lajrab, appeared on the scene and captured them. The prisoners were grossly ill-treated and then ordered to march ahead of their captors. After a few minutes walk, they fell shot in the back. Erable and the mechanic Pintado were killed outright. Gourp survived, in spite of several bullet and knife wounds. In this pitiable condition, he was brought back to Juby and immediately transported by aeroplane to Casablanca where he died a few days later.

On the 31st March of the following year, O Lajrab, the assassin of our men, appeared at Cape Juby with a troop of 40 armed men and two camels. He penetrated into the fort and escaped unmolested. In the afternoon he was once more received by the colonel commanding the fort who had a long conversation with him. As he left the Moors greeted him with prolonged cheers and when, with his men loaded with presents, he passed in front of our mechanics the Moors made a gesture indicating decapitation.

On the 11th June following, a raid, headed by this same O Lajrab, was organized in the Juby region and Port Etienne was attacked.

(e) On the 2nd March, 1927, the Uruguayan hydroplane piloted by Commander Larre Borges with a crew of three, had a breakdown about 100 kilometres north of Cape Juby. The Uruguayan airmen succeeded in swimming to the coast and were captured by the Moors. On the 5th March, the pilot Mermoz carrying the mail to Dakar, sighted the hydroplane, and immediately reported its position. On the 6th March, the pilots Rigueile and Guillaumet, starting from Juby, landed near the frame work of the hydroplane and obtained the first information from the Moors. The Spanish Governor then asked our pilots to assist him and to this they readily consented. On the 7th and 8th March, the pilots Reine and Antoine transported the emissaries of the Spanish Governor to meet the captors of the Uruguayans.

On the 10th March, the pilots Reine and Antoine returned to the same point and had the satisfaction of taking on board the Uruguayan crew, who had been ransomed.

(f) In the night of the 30th June—1st July, 1928, an aeroplane piloted by M. Reine and carrying the engineer Serre, struck a dune and landed in the region of Cape Garnet, south of Juby. As we know, MM. Serre and Reine were not released until 4 months had elapsed, during which they had endured terrible sufferings and unspeakable humiliations.

(g) Early in October, 1928, the pilot Vidal was forced to land in the Ifni region, in the Spanish zone. He was released a week later without any difficulty, thanks to the relations which the Commander of the French annex at Tiznit maintains with the Kaids of this region.

(h) The captivity of a Spanish captain, commanding military aviation at Juby might also be mentioned. He landed 12 kilometres

from this point and was captured by the Moors, who released him a fortnight later, on payment of a ransom.

In order to obtain the release of this officer, the military governor of Juby had applied to M. de Saint-Exupery, head of the aerodrome of the General Air Mail company at Juby, and had asked him to fly to the territory of the tribe which was detaining the Spanish captain and to land his emissaries. M. de Saint-Exupery complied with this request.

(i) On the 17th October a Spanish Army aeroplane was shot down by rifle fire 250 kilometres south of Juby. The pilot of the escorting aeroplane came to M. de Saint-Exupery for help. He returned with him and landed near the airmen, who had already been captured. He released them and brought them back to Juby. He returned a second time to fetch the Spanish escorting army aeroplane, which having landed was unable to take off again. He succeeded in re-starting the engine, and returned with the aeroplane to Cape Juby.

Such are the facts. One cry only rises from all our hearts ; "This cannot go on !" The honour of the civilized nations that have consented to allow their flags to fly on African territory, forbids that the gallantry and courage of our airmen—these picked men fighting constantly against the forces of nature—should be at the mercy of a handful of plundering Moors. Measures must be taken to put an end to such a state of affairs. The Governments concerned can no longer remain indifferent. After all, is it such a difficult question to tackle ?

The situation is well known. The Rio de Oro is a vast desert region stretching from Oued Draa, in the north, to Port Etienne in the south, along a coast-line 800 miles in length and 200 miles in depth.

There are three Spanish posts in this region, at Cape Juby, Villa Cisneros and la Guera. But they have no authority over the territories of the interior ; they are forbidden to leave their posts and are, so to speak, prisoners behind their walls and wire entanglements. Spain's attitude towards the Moor is that of a neighbour, not of a master. She refrains from any outside action which, in case of accident, might involve her in reprisals or even worse.

In these circumstances it will be easily understood that the interior of the country is practically cut off from the rest of the world.

Between Morocco, the Sahara and Mauritania, it forms a sort of vast criminal centre where the brigands of the desert, secure in their impunity, can prepare their evil plans at leisure and retreat after carrying them out.

Moreover, by our relations with Rio de Oro through Mauritania we have obtained some experience in these matters, and are able to perceive what measures are required.

The distinguished Governor-General of F. W. A. devoted to this particular subject, a passage in the speech which he made recently before the Government Council at Dakar. It is interesting to recall his words :

“During this year the Nigerian Sahara was visited by small bands that were easily repulsed before they had even begun to plunder. The Sudanese Sahara was calm until the month of October, when a band of raiders—composed of 56 riflemen and commanded by a son of Abidine—suddenly appeared from Seguiet El Hamra. On the 11th, at Tisserlitine, this group encountered our Protective Service, which had been stationed there since the beginning of the month to ensure the protection of trans-Saharan missions. Our regular forces and our partisans in Adrar des Ifoghas were immediately given the alarm and pursued them relentlessly, overtaking them on the 15th in Oued In Atankarer, and destroying them after a 7 hours engagement. The raiders lost 22 men, including Sidi Lamine O Abidine, 4 wounded, and left 30 prisoners and 41 rifles in our hands. In this encounter we lost 9 partisans only, 2 of whom were wounded. Mauritania would have been just as peaceful, but for the threat of an important raid which was being organized early in the spring in Rio de Oro, and which kept us on the alert until the last few weeks. In this connection it might be useful to look back and to investigate, in the light of definite facts, the results of the policy we have followed for the last five years on the borders of this colony.

Until the end of 1923 all was relatively quiet, all our efforts being concentrated on securing at least the friendly neutrality of the great nomad tribes. We indulged in the hope of subjugating them by persuasion and, with this end in view, no sacrifice, whether pecuniary or of self-interest, was spared. We were entitled to hope that this policy, which has been called the policy of “taming” (*apprivoisement*), would continue to bear fruit; unfortunately events were about to

undeceive us and to prove how little the Saharan tribes of Seguiet-El-Hamra and Draa could be trusted.

Whilst their *sorbas* continued to bear peaceful promises to us at Saint-Louis and to receive the presents we lavished on them, expeditions of unusual strength and audacity were being organized in Rio de Oro.

The awakening was bitter. On 28th November, 1923, Lieutenant Bedrines, Corporal Balizet and 21 riflemen were massacred at Chreirick by the Ouadjaha band. Four months later, on 26th March, 1924, an audacious operation, hitherto unprecedented in the annals of Mauritania, was carried out when the fortified post at Port Etienne was attacked. This attack was repulsed owing to the valour and vigilance of Lieutenant Le Rumeur and the garrison. On 5th May of the same year Ouadjaha, smarting under his defeat at Port Etienne, attacked the flocks of the Atar camelry detachment. Their leader having fallen at the beginning of the engagement, the raiders fled abandoning their booty. Our adversaries were not discouraged by these two defeats. The Ahel-Ma El-Ainin next took the field and, on 23rd October, a band of 150 rifles—the majority being Telamides of El-Oueli—attacked the Zeriba of the 2nd Camelry detachment at Lekdim, killing or wounding 32 men, two of whom were Europeans, and carrying off 200 camels.

This unfortunate year—1924—ended in a *coup de main* carried out by night on the Chinguetti post, and led by Ismail O Bardi. When discovered, the raiders had advanced within 1 kilometre of the post.

And on each occasion we were unable to retaliate, for when our units started on a counter-raid they came up against the barrier of Rio de Oro, behind which, their evil work completed, the plunderers mock at our penalties.

So great was our desire for peace that, in spite of everything, we continued to parley, to treat with and to receive the emissaries of our enemies, still hoping that our conciliating attitude would bring about the relief we desired.

All our illusions were dispersed by the Treyfia affair. On 2nd April, 1925, a *harka* of 350 rifles surrounded the 1st Camelry detachment. A fierce engagement followed lasting three days and three nights, during which heroic Captain de Girval lost his life, besides 16 killed

and 6 wounded. The action did not cease until the raiders fell short of ammunition and withdrew, leaving 50 bodies within our barbed wire entanglements.

This was the finishing blow. We could no longer entertain any doubts as to the value of the offers of submission and protestations of friendship showered on us at Saint Louis. The defect in the methods followed was only too apparent, as also the necessity of adopting a firmer and more direct policy towards the people who might well characterize as weakness and impotence the forbearance of which we had given them only too many proofs.

Military measures were adopted in conjunction with those of a political order. Our units became nomad groups and were strengthened in effectives, arms and modern means of intercommunication. Young and spirited cadres came to revive the great traditions of our pre-war camelry companies, trained in the school of men such as Gouraud, Claudel, Mouret.

As a result of the North African Conferences, Algeria placed unreservedly at our disposal the help of her Saharan companies for the pacification of the Western Sahara. I am happy to acknowledge that never during these 3 years has she begrudged us her constant and disinterested services.

It was not long before the results of this change of policy became apparent. As early as July a raid by 300 rifles, led by the brother of Ouadjaha, who had massacred the personnel of one of our convoys, was, in its turn, overtaken at Rasseremt by our Adrar warriors and regular Moorish guards. Seventy of his men were killed and he lost a number of rifles and camels, whilst the remnants of his force *sought refuge in the Rio de Oro*. Our enemies were surprised but not yet discouraged by this blow. Thus Lieutenant Cravil, having learnt that our old enemy Ismail O Bardi was preparing a new offensive at Koedia d'Idjil, fell upon his encampment, carrying off a number of his camels. Ahmed O Hammadi led a band of plunderers 60 miles north of Atar, but *when our airmen flew over them he was seized with panic and fled without striking a blow*.

1927 was quieter. Nevertheless, Sheik O Lajrab—the murderer of the airmen belonging to the Air Mail Company—having tried in vain to attack Port Etienne, conceived the unfortunate plan of descending in the direction of Trarza, with the intention of

plundering our protégés. On being pursued, in succession, by our regular units and our partisans, and beaten in each encounter, he finally left 12 killed and 21 prisoners in our hands.

I should like to mention that all these events took place on our territory and some of them in the very heart of Mauritania.

This year, in the month of May, corroborative evidence received from Port Etienne, Atar and Agadir, warned us of the preparation, east of Cape Bojador and Villa Cisneros, of a great raid, commanded by Ismail Ould Bardi and Ahmed Hammadi, whose objectives were Cape Juby, Villa Cisneros, Port Etienne and the Adrar. After several months spent in nerve-racking expectancy, our agents told us that the great efforts made by professional agitators to raise a particularly powerful harka (native troop) against us had met with almost complete failure. The counter propaganda of our emissaries, the habitual discord between Moorish tribes, the understanding and friendship we had been able to maintain with the leading nomads, the defensive measures taken and the definite idea entertained by the dissident chiefs that they had been detected, even at their earliest foregatherings—all these circumstances had destroyed any inclination to carry out an action on a grand scale. As early as August it was certain that we should only have to face the attacks of a few chiefs of bands with somewhat reduced forces at their disposal.

Towards the middle of September, one of these dissident chiefs—Mohammed Ould Sidati—with 140 rifles, crossed the Spanish frontier south of Zoug, in the direction of Atar. As soon as he appeared on our territory, he was held up by the choufs of the Bou Rzama region and, having suffered losses from the first engagements, the raiders were forced to retreat, pursued as far as our border by one of our nomad groups.

The chief, if not the sole source of the troubles and difficulties with which our Saharan defences are faced, is so clearly explained, by a simple statement of events, that it is unnecessary to insist further on this point. The measures to ensure our safety being constantly improved, have worked perfectly. The reorganization of our Desert Police Force began in 1925 and now completed by the issue of the most up-to-date equipment, such as portable wireless sets and aeroplanes, is proving increasingly efficient. But these military and material means, although as highly developed as our

budgetary resources will permit, would not, alone, be sufficiently powerful to accomplish the work of lasting peace which is our aim. Their employment must be prepared and backed by persevering political action.

The latter may have varied in its methods of application in accordance with circumstances and temperament of the commanders responsible for directing it, but, for the last ten years, its essential principles have not altered, thus ensuring a continuity of views which is indispensable above all in the land of the Moors, and which may be summed up in the formula : " Armed friendship."

Such is the broad outline of the policy which long experience has led us to practise in our Saharan borders. *When it will be possible to apply it simultaneously on either side of an ideal frontier which does not represent anything very definite in the eyes of the Moors but which, suddenly rises up as if by magic, between the plunderers and the punishment about to overtake them, we shall have very nearly finished with the brigands whose sole object in life is to steal flocks and hold travellers to ransom. We shall no longer be driven to this paradoxical solution which consists in treating actual highwaymen as belligerents. For the credit of the European authorities who have a Mandate over these territories, it is essential, in the first place, to put an end without delay to the exploits of the great companies which sweep the Western Sahara.*

What, in fact, are the possible remedies ?

There is one which stands out after all the above statements. As long as Spain refrains from ensuring the policing of the interior of the territory, she should, it would appear, allow the right of way to the regular forces of neighbouring regions. The Moors, if they knew they were no longer covered by the ideal frontier which runs across the desert, would no doubt hesitate, either to send raids against the neighbouring tribes, or to capture airmen who have been forced to land and ill-treating them.

But undoubtedly it would be far best if Spain would agree to ensuring the maintenance of order in the territories which have been assigned to her.

Firstly, the controlling by aircraft would be of great use. As the English say, " The squadron which flies is the policeman on his

beat." They have proved this in Mesopotamia, which they have succeeded in pacifying by their squadrons alone.

Further there would be the control by the Meharists. A group of 200 Moors armed and well led, constituting a grave menace, would no doubt suffice to ensure security. This has been proved in Mauritania, where nomadic mounted tribes move over the frontiers of Rio de Oro. Every time that our airmen have had breakdowns between Port Etienne and Saint Louis they have experienced no trouble. The Moors knowing well to what reprisals they would expose themselves in case of attack, have shown themselves, if anything, servile. It would be the same, if along the coast of the Rio de Oro a mobile group of Meharists could penetrate in case of necessity.

Finally, there is economic repression. The Moorish tribes are forced to import various materials for their existence ; stuffs, sugar, tea, and if the season has been dry, barley. They also need to sell the wool of their flocks. The centres of trade are : Agadir, Juby, St. Louis.

It appears that if France and Spain came to an agreement to shut these stores temporarily, as a reprisal, the Moors would be very upset. We have just had a striking example :—

A few months ago the captain airman Martinez had a breakdown at 75 miles from Juby. The tribe of the Ait Gout, who captured him, kept him prisoner 16 days, and released him for a ransom of 1,500 douros, that is to say, 30,000 francs. Following this adventure, the Spanish Governor forbade the factory of Juby to buy the wool, which the Ait Gout export annually for several hundreds of thousands of francs. The Ait Gout being at war with the tribes of the north and south, had only Juby as an outlet. They negotiated for 6 months, and even proposed to the Spaniards to restore the ransom. It will thus be seen that this purely economic action would have great effect.

But it is not for us to define the methods in detail. The problem has been set. We must now solve it. Spain would not wish us to say much longer that she is disinterested in the security of the route upon which more and more of the world pilots, hers as well as others, will be called upon to circulate.

The French colonials are combining with the airmen to request our Government to follow up the negotiations begun with the Spanish Government with a view to arriving as soon as possible at the hoped for results.

FRENCH ZONE.

Resignation of M. Steeg.

M. Steeg, the Resident General of French Morocco, resigned his post on 2nd January, 1929. The reason given for this sudden decision is the passage through the French Chamber of a recent enactment to the effect that Members of Parliament may not hold paid office longer than a period of 6 months, and may not be re-appointed immediately. The telegram announcing the resignation said that the heavy responsibilities attaching to his political position (as Senator for the Seine Department) would prevent him from remaining until the normal expiry of his mission. M. Steeg had been Resident General since the departure of Marshal Lyautey in October, 1925.

M. Lucian Saint, Resident General in Tunisia, succeeds M. Steeg in Morocco.

The situation in Morocco.

M. Steeg, the late Resident General in Morocco, made the following statement, on vacating his post, with regard to the situation in Morocco and with special reference to the undertaking of a military expedition in the Tafilelt :—

The policy of pacification progresses with a continuity based on self-confidence. The Moroccan incident of Oued-Zem, the tragic Algerian ambush of Colomb-Bechar, in which General Clavery lost his life, constitute serious acts of banditism which call for the severest punitive measures. But it would be a grave error to attribute these isolated incursions of plunderers, as the interpretation of a political tendency; the professional touch in these attempts at rapine only emphasizes more clearly the immense work of penetration accomplished since the sanguinary days of 1925, when the dissidents attained the very walls of Fez.

It was the year 1926 which, by the reduction of the *tache de Taza* marked the end of the Rafaine expedition; I prefer not to remind you of what it cost in human lives and millions.

In 1927, General Vidalon cleared the neighbourhood of Ouezzan where the most perfect tranquillity has since reigned.

In 1928, the tribes of the Ida or Tanam sent in their submission, as well as the numerous tribes to the south of Agadir and, finally, we occupied points of essential importance dominating the famous redoubt of Oued el Abid which soon made its gradual investment possible.

In a more general manner, during these 3 years, more than 40,000 families, won over by the prestige of France, the force and generosity of our pacificatory action, came over to us.

Undoubtedly a few dangerous centres still exist. Our troops are obliged to mount a vigilant guard against the rebel bastion of Tadla, and some of our Algerian friends at times reproach us with not having organized a vast operation in the region of the Tafilet. That there is an abscess to be cut out I do not dispute. But may I be allowed to invoke 8 years of North African life to recall to those who may be tempted to forget it, that operations of this type can only be undertaken when both abundant resources in men, equipment and even money are available for carrying them out. Moroccan history has retained too many recollections of those advances which only end in the multiplication of advanced posts exposed to continual threats of being surrounded.

It cannot be too often repeated, in Morocco more than anywhere else, to retreat after having advanced involves a double set-back, and nothing can justify an advance, if there is no certainty of consolidating it and definitely guaranteeing the conquered territory. Such operations demand a long and methodical preliminary preparation. It is essential to make them profitable, and at the same time safeguard human lives, to prepare our action by the perfecting of vast plans of railway communication which create an effective solidarity between the different elements of our North African possessions. This is the end for which we, my colleague and friend M. Bordes and myself, have worked incessantly.

It is also essential to obtain the renewal of certain offensive and defensive means, often already obsolete, and obtain that mobility in inter-communication, that agility of the security units, which can only be visualized by the combined employment of armoured cars, guns and aircraft.

It is only after having elaborated and set working a sound organization of all these means of penetration that an administrator, worthy of the name, can devote himself to policing work, of which it may be said that they are successful if they do not involve those losses in human lives which are irreparable to a country, as in the case of France, deprived by the last war, of its most vital forces.

Ambush near Colomb-Bechar.

On 28th January, 1929, French troops occupied the oasis of Tarda, 25 kilometres south-west of Ksar-es-Souk in the northern part of Tafilelt. There was no resistance.

The occupation of Tarda will enable better protection to be given to the military road along the east bank of the river Ziz made in 1928, and the country can now be patrolled as far west as the plain occupied by the Ait Hammou who are the authors of most of the trouble in this area.

Attack on motor convoy.

On the 3rd January, 1929, dissidents attacked a motor convoy consisting of four lorries coming from Oued-Zem, when within 2 miles of Beni-Mellal (Tadla). One Frenchman and one native were wounded.

Apparently the convoy was attacked just at dusk when the protective troops from Beni-Mellal had been withdrawn.

Opening of the broad gauge railway from Casablanca to Marrakesh.

The new line completes the normal gauge system from Fez via Meknes, Kenitra, Rabat and Casablanca to Marrakesh. When the line, now under construction but not due for completion till about 7 years hence, between Fez and Oudjda has been made, French North Africa will have been equipped with a normal gauge system extending from the further side of Tunisia to the chief centre in Southern Morocco. The economic and strategic importance of this can hardly be exaggerated, especially if it be looked at in conjunction with inland communications already in existence, or in prospect, and the efforts which are now taking shape to bring a Trans-Sahara railway within the realms of practical politics.

The Marrakesh line was open as far as Sattat in 1925. The whole from Casablanca is about 165 miles long. The opening does not mean that it is yet ready for general traffic, but it is hoped to start goods trains in the near future ; 3rd and 4th class passenger services by the end of 1928, and a full service early this spring. The line will have to compete with highly organized motor services running over excellent roads.

The formal opening of the line took place on the 7th November, 1928, when the Resident-General inaugurated it and travelled by it to Marrakesh to attend the celebrations there in honour of the occasion. A curious feature of the arrangement was that the Sultan preceded M. Steeg two days earlier. His Majesty also went by train and a half-hearted attempt was made to represent him as having performed the opening ceremony, but there is no doubt that the opening by the Resident-General was the more official of the two. This circumstance is not without significance as regards the French attitude towards a new and youthful Sovereign.

The railway company administration, in concert with the organizations most interested in developing tourist traffic in Southern Morocco, invited numerous guests from France to be present at the inauguration. The guests were chiefly French deputies and representatives of big French companies and organizations which would benefit by the development of Morocco, but journalists from France were also much in evidence. The railway company, with the full support of the local authorities, did their utmost to impress the visitors favourably with Marrakesh and its surroundings as a potential rival to Cairo, and to this end no pains were spared to make the festivities a great success. In this respect the railway company certainly succeeded.

NICARAGUA.

INSURGENT ACTIVITY.

General Moncada, the new President, has stated that peace reigns throughout Nicaragua, except in the province of Northern Jinotega and on the Honduran frontier, where bands of the followers of General Sandino are still causing trouble. He proposes to send a well-equipped force into this district.

Subsequent to this announcement a British owned plantation in the Jinotega province was raided by outlaws. A detachment of American marines was despatched from Matagalpa, but was unsuccessful in bringing the outlaws to book, and sustained a number of casualties in the attempt.

PERSIA.

OPERATIONS AGAINST DOST MOHAMED.

For many months past the Persian Government have been laboriously concentrating a mixed force of all arms in the Persian Sarhad with the object of bringing to book the local governor of Persian Baluchistan, Dost Mohamed Khan of Bampur. This chief, according to official statements, had abused the confidence of the Shah by establishing himself in a position of virtual independence in his own province.

Thus, after formal negotiations, coupled with the threat of an impending advance, had failed to produce any alteration in his attitude, orders were issued from Tehran, in September, depriving Dost Mohamed of his Governorship and declaring him to be a rebel. Meanwhile, arrangements for the advance of a Persian force, numbering, with lines of communication troops, some 5,000 men, had been perfected, and active operations commenced towards the end of November. By concentrating such an imposing army the Persian Government were leaving little to chance and, in the event, their caution proved to be justified. Despite truculent manifestoes issued by Dost Mohamed, both Bampur and Fahruj were occupied by Government troops and Dost Mohamed was obliged to retreat to Sarbaz with the remnants of his tribal force. In the circumstances it is not anticipated that there will be any further serious resistance.

PORTUGAL.

VISIT TO THE LINES OF TORRES VEDRAS.

Starting at an early hour, with an officer of the Staff School, I arrived at the eastern flank of the famous "Lines" by 9 a.m.

On the previous day the same officer had given me a two-hour conference on a relief map of the Lines in the Staff School, where he is chief instructor in tactics. He brought a plane table and other

instruments, and some quite good maps, including a copy of John Jones' original.

I had previously been filled with admiration for the famous leaders and engineers in the early 19th century, who must have ridden miles over very rough going in their reconnaissance of this and other positions of the campaign. When, however, we left the main Lisbon—Santarem road and the car started to negotiate some of the "excellent communications behind the lines," I began to feel that those gallant gentlemen had perhaps rather an easier passage.

We left the car at certain points, and proceeded on horseback or foot to visit and inspect more closely some of the more important parts of the well planned series of fortified localities. Among others, we visited "Signals Redoubt," "Redoubt 120" in front of Sorbal (from which the shot was fired at Massena during his famous personal reconnaissance), Monte Agraca (Wellington's view point), Fort St. Vincent (Torres Vedras), and other forts in both lines.

It was a most interesting day, and my guide, Comandante Rato ; who served on the staff of the 1st Portuguese Division in France, was a very able and clear demonstrator.

One of the most interesting points which strikes one with regard to the Lines is that, in spite of the increased range of modern weapons, the dispositions of the various works and entrenchments, which Wellington approved and Fletcher and John Jones carried out, appear to fulfil in nearly every case the requirements of the modern defensive position.

The natural strength of the position would even compel tanks to use the few defiles, which no doubt the modern Wellington, given enough time and the much-discussed "adequate" anti-tank weapon, could render sufficiently unpleasant.

One feels quite sympathetic with the French Marshal who, with an army already poorly supplied, arrived in the Alemquer—Villa Franca area, which had been ruthlessly stripped of all sources of supply, rode out on a reconnaissance of this forbidding series of hills, and then was nearly killed at a range which to-day seems almost incredible, considering the weapons of that period.

Interesting features of the work of fortification are the elaborate bastions for the artillery positions, and the thoroughness with which

each separate fort was equipped with powder magazine and water cistern—still, in some cases, in quite fair repair.

The cobbled military roads behind the ridges connecting the forts, still used by peasants at the present time, are also in a wonderful state of preservation. The great artificial escarpments are still very obvious, and remain as a permanent memorial to the genius of those who designed the lines and the labour which constructed them.

It is, perhaps, a harsh criticism, but true, that the imitation marble column which has been erected to their memory on the Tagus side has only one nice thing about it, which is the inscription "Non ultra."

The fact that this herculean task was carried out in all weathers, with scarcely no trouble, in two languages, is still commented on in Portugal to-day and admiration expressed for the British system of prompt payment, even in those days, when money weighed considerably more.

ROUMANIA.

THE NEW GOVERNMENT'S PROGRAMME.

The Elections having gone very greatly in favour of the Peasant Party, the new Parliament was opened on 22nd December. The special session was opened by the Regents, and Prince Nicholas read the Royal Message. The principal items of the Government's programme are as follows :—

- (a) Support to the League of Nations and adherence to the Kellogg Pact.
- (b) Establishment of a sound local administration based on decentralization and local autonomy. This will include the reorganization of the Gendarmerie and of the Police.
- (c) Arrangements for equality of treatment between foreign capital and the capital of the country in order to ensure the collaboration of foreign capital in the exploitation of the natural riches of the country.

(This was received with prolonged cheering by the House.)

- (d) Reorganization of the finances of the State in order to cover the deficit on the previous Budget and to balance the new Budget. This is necessary in order to make way for a foreign loan and for the stabilization of the national currency.
- (e) The reorganization of the Army. No details were given, but it must be remembered that reorganization in the Roumanian Army has been pending for some years, and it is to be hoped that an effort will be made to reduce the size of the Army, and at the same time, to equip it properly.

It will be seen that the new Government's programme is ambitious, but M. Maniu and his party are in deadly earnest, and they have at present about 90 per cent. of the country behind them. Even though they are politically untried and have great obstacles to overcome, their arrival in power marks a fresh epoch and can hardly fail to do good.

COMMUNISM.

Although there are communist organizations both in Transylvania and in Bessarabia their efforts have been of little effect in Roumania. This is largely owing to the fact that the peasants are landowners and therefore do not take to communism very easily. During the political struggle between the Liberal and National Peasant parties, the communists had a certain scope to develop their propaganda and it was also decided from Russia to give them financial assistance. However, this assistance came too late to allow the communists to complete their organization by the time the Liberal Government fell, and they were unprepared for the general election. The result of this election which gave most sweeping majorities to the National Peasants throughout the country, was most disappointing to the communists, and although the communist parties were allowed a little breathing space between the disappearance of the Liberal Government and the elections, they were quickly repressed again by the end of December.

Allegations have been made that some of the leaders of the National Peasant party are in contact with leaders of the Russian Communist party, but it is clear that these allegations are unfounded.

The fact of the matter is not only are the Roumanian peasants disinclined to take up communism but also the Roumanian gendarmerie is extremely quick in defeating any attempt to develop communism. This applies even in Bessarabia where most communism is to be expected, and unless there is a serious political upheaval in Roumania there seems to be little chance of communism attaining any results.

SPAIN.

INAUGURATION OF THE ROME—GENOA—BARCELONA AIR LINE.

This new commercial line was inaugurated on the 15th November by the arrival at Barcelona of a Dornier Wal hydroplane, of the Italian Navy, bringing a number of Italian officials representing the Government and all the Services. They were received by Spanish and Italian representatives.

The hydroplane left Rome at 7 a.m., arrived at Genoa at 9-45 and left again at 11-15; after a short stop at Levele to re-fuel it left at 12-30 for Barcelona where it arrived at 4-30 p.m.

The service will be carried out by four machines, each having four 500 h.p. engines, and capable of carrying 19 passengers.

REVOLT AT CUIDAD REAL.

The following is considered a reliable account of the actual events which took place at Cuidad Real, a small town 200 miles south of Madrid and to the east of the main line.

At 3-30 a.m. on 29th January, the 1st Light Artillery Regiment left the barracks under the commanding officer. The second in command went direct to the barracks of the Guardia Civil and threatened the lieutenant-colonel commanding, who surrendered and gave up the arms of the men under his command. The artillerymen then proceeded to bring their guns into the street, and placed them in tactical positions both in and outside the town. They subsequently seized the railway station and placed sentries on all banks in the town. An artillery major interviewed the secretary of the civil government and informed him that he, the major, would henceforth take over the duties of governor. A captain was also installed as mayor of the town. Trains were allowed to enter but not to leave the town, and soon that procedure was taken with other

vehicles. Officers visited the principal business houses and stated that they would be responsible for law and order, so business could proceed as usual. The railway employees, however, refused to continue to work.

At 5-30 p.m. aeroplanes flew over, dropping typewritten pamphlets which read as follows :—

“The whole of Spain is quiet. Give it up and go back to barracks. If not, to-morrow you will be bombarded.”

Half-an-hour afterwards the regiment returned to barracks with their guns.

The civil authorities immediately retook control, and telephone and telegraph communication was re-established. The officers remained in barracks “in a voluntary state of arrest.”

Events reported prior to the outbreak.

(a) *First news.*—News of the revolt was received by the authorities in Madrid about 10 p.m. on the 28th January, and preparations were made during the evening for the assembly of motor lorries to convey 4 battalions of infantry. A cavalry detachment from Alcala de Henares was also warned to stand by. The aeroplane flight referred to above was also warned.

(b) *Details of the supposed plot.*—The outbreak at Cuidad Real was apparently one of a series which had been planned to take place simultaneously at the following places :—Barcelona, Cartagena, Valencia, Cadiz, Gijon, and Corunna. The arrangements are reported to have been made by a general whose name is not known. He apparently visited the first three places, and was heard of at Cuidad Real on the night of the 28th. He is believed to have escaped into Portugal. The order countermanding the revolts in these various places apparently failed to reach Cuidad Real, which is a somewhat isolated town off the main line.

Measures taken by the Government.

The cavalry detachment referred to above from Alcala de Henares was countermanded. The flight of aeroplanes carried out their rôle of dropping pamphlets, and the 4 battalions of infantry left in lorries in the afternoon of the 29th, arriving the same evening. They were under the command of Brigadier-General Orgaz, who was placed in

charge of the situation. All troops, with the exception of one infantry regiment and a detachment of engineers, returned to Madrid on the 1st and 2nd February.

It appears clear that Senor Sanchez Guerra arrived with his son at Valencia on the morning of the 30th.

Senor Sanchez Guerra is a septuagenarian politician who was for a short time conservative prime minister in 1922. Some years ago his sentiments with regard to General Primo became so vehement that he voluntarily exiled himself and has lived in France for the last 5 years. Rumour names him as the leader of the conspiracy. It was further reported that he came by a small vessel from Port Vendee and was considerably delayed. It is surmised that this delay was responsible for the counter-order of the plots at the other towns. It seems that Sanchez Guerra, although arriving two days overdue, proceeded to the Captain-General, Castro Girona, who appears to have been involved in the plot, and urged him to carry on the movement. On the Captain-General appearing to disagree Sanchez Guerra is reported to have directed his activities to the 5th Artillery Regiment where the officers received him enthusiastically. The colonel of the regiment was against taking any action, and after discussion with the officers and an interrupted address to the men, Senor Sanchez Guerra gave himself up to the authorities in spite of the vain attempts to persuade him to escape while he was yet able to do so. As the leader of the movement has now, according to these reports, acted somewhat extravagantly according to the Spanish saying "as a Caballero," it is possible that the trouble referred to at Valencia on 2nd February may have had some re-action in his favour.

Lieut.-General Castro Girona was relieved of his appointment of Captain-General of the 3rd Military Region of Valencia which he had held since March, 1928, the reason given being "not having been sufficiently energetic in his duties of suppressing demonstrations against the Government." This officer had a most distinguished career in active operations in Morocco for a period of 15 years, the most notable of which being during the withdrawal from Sheshewan in 1924.

There appears to be no doubt that the Government was well informed beforehand of the proposed revolt, and the measures taken in the isolated case that arose seems to have been easily successful. The time might also be considered as well chosen by the conspirators,

for the King was away in the south shooting, and General Primo de Rivera was reported as being ill. Moreover, many prominent officials in the provinces were away from their posts.

A translation of the text.

ROYAL DECREE DATED 19TH FEBRUARY, 1929, DISBANDING THE
CORPS OF ARTILLERY OF THE SPANISH ARMY.

A.—Preamble.

Sir,

The Government believing in blind faith that the benevolence with which Your Majesty was advised as a conclusion of the deplorable happenings of 1926, connected with the conduct of the Officers of the Artillery Corps, to which Your Majesty so magnanimously responded, would be a sedative to passions and a fruitful source of cordial sentiments towards the public Power, the High Command, their own Commanders, their Comrades of other Arms and Corps and, principally, towards the Spanish society—uneasy and apprehensive at the attitude of a strong nucleus of Senior Officers and Officers who should in duty support public peace and tranquillity but are disturbing it and constitute an atmosphere propitious to rebellion of every kind. It is certain that not all the Cadre of Senior Officers and Officers of the Active Scale of Artillery feel, think or act thus; but up to now not one exception has been made of a brave voice exhorting publicly in tones of command or camaraderie those who, more blind and obstinate, are giving a constant and disuniting example of pernicious indiscipline which must either be stopped at once or soon it will be too late, for its propagation will lead to frequent military mutiny and social anarchy whilst stupidity leads many to alliances and dealings of a dangerous character, as if they had forgotten the virtues and principles of honour which always constituted their glorious tradition.

It is not a moment, Sir, in which to write much about events and things of which Your Majesty is aware and upon which the whole of Spain—ashamed and pained—is commenting, and which, unfortunately, have already passed the frontiers; but there is it a time, in face of the health of the Country in danger, to appeal to the higher spirit of Your Majesty for full approval of the measures

which the Government proposes in the present Royal Decree, approved at a Council of Ministers.

Madrid, 19th February 1929.

(Sgd.) MIGUEL PRIMO DE RIVERA
Y ORBANEJA.

B.—Royal Decree.

In agreement with my Council of Ministers and at the proposal of the President, I decree the following :—

Article 1.

From the date of the publication of this Royal Decree in the *Gaceta de Madrid*, all senior officers and officers of the active scale of the Artillery Corps shall consider themselves, temporarily civilians, without right to pay of any kind, nor right to wear uniform or use the military *carnet* until such time as they are readmitted to the Army.

Article 2.

In the case of certain officers regarding whom the Ministry of the Army has special information justifying such measures, the Minister of the Interior will fix their residence, to which they must repair in the time limit of 24 hours following the receipt of the corresponding order.

Article 3.

The military authorities in each region shall take charge of all armed corps, clubs, establishments, parts or workshops in the region and will substitute commanders by senior officers and officers of other arms and corps in the degree strictly necessary to avoid interruption in the functioning of these establishments. The following personnel shall continue at their posts : Artillery personnel on the reserve scale ; serjeants and corporals and auxiliary personnel ; foremen and workmen. Endeavours shall be made to prevent any more harm being done than is inevitable with the application of the letter and spirit of this Royal Decree. Classes in the Artillery Academy will be suspended and cadets discharged until they are newly called up for incorporation, during which period they shall not wear uniform.

Article 4.

Before the 1st of June the reorganization of the Artillery Corps will be completed and its cadres and establishments of officers will have to swear fealty and unswerving obedience without reserve, on their faith and on their honour, to the country, represented by the Flag; to the King and to the established Government, and in a concrete and categorical manner, to the present Government, against which they have acted seditiously. All those who wish to be re-admitted to the corps must make their application, in writing, stating thus in an expressive and literal manner on the application forms, which will be submitted to His Majesty through the governors, military commanders and captains general, who will deal with them with the greatest urgency according to telegraphic instructions received from the Ministry of the Army. These applications may be presented from the date of publication of the present Royal Decree.

Article 5.

The senior officers and officers of the active scale who are re-admitted to the corps will have a right to their pay during the period of temporary separation and those whose present appointments are confirmed, to other allowances which correspond to them. Those who are not re-admitted will be classified, except in cases of special judicial or governmental decision, with arrears of pay corresponding to them.

Article 6.

Are excepted from the former dispositions: all personnel of Senior officers and officers of the active scale of artillery serving in Morocco, the Baleares and the two provinces of the Canary Islands; all officers holding appointments of a civil or special nature; aides-de-camp and officers under special orders.

Article 7.

Dispositions for the immediate application of this Royal Decree and the necessary complementary dispositions will be dictated by the Ministries of the Army and Interior.

Article 8.

Against the application of this Royal Decree no appeal of any kind may be made other than by petition to the Council of Ministers.

“ALFONSO.”

19th February, 1929.

SEMI-OFFICIAL NOTE DATED 19TH FEBRUARY, 1929.

In a semi-official note published simultaneously with the Royal Decree disbanding the officers of the artillery arm, the Government gives as its object in taking this latter step that of rapidly cleansing the personnel of senior officers and officers of the active scale of the artillery corps, eliminating from it, definitely, all those "who by their hotheadedness and obstinacy have continued to maintain a state of latent indiscipline which is disturbing public tranquillity with the dangerous risk of breaking it down altogether; which tranquillity has been maintained up to now in an exemplary manner by the rest of the army in all its departments.

After a reference to the preamble of the above-mentioned Royal Decree in which the situation in regard to the artillery officers is explained—the government states that it has not yet lost complete faith in the qualities and comprehension of the officers of the artillery corps—and hopes that many who have protested against the unqualified conduct of their comrades, a few of whom, posing as their representatives have co-opted them by means of a misunderstood *camaraderie*, will have the civic and personal courage to act for themselves, each one according to the dictates of his own conscience, which would naturally be towards patriotism and loyalty; and will hasten to apply for re-admission to the corps from which, according to this decree, they are temporarily separated. There is no question of calculation as to the future or present sacrifices, but honestly to declare themselves and show an example. They can redeem by an act of true and compulsory military virtue the past mistakes, the weakness and short-sightedness of each one and their deplorable consequences on the general prestige and security.

The note states that the artillery dispute, which has existed for half a century, is not one of *esprit de corps* or conviction, for, in regard to promotion by selection the present Government has, by suppressing promotion for distinguished service in the field, gone much further than the supporters of the *Escala Cerrada* ever asked. The Government contends that the artillery are only fighting to maintain a privileged *régime* which made them an autonomous power against the Governments and even against the Ministers of War themselves who weakly regarded the corps as beyond their jurisdiction. These obstinate and mistaken ideas clashed with those of a

Government whose own predominant military character and conception of dignity led it to see the necessity of unifying legislation for all, rejecting the supposition of distrust in its justice ; had it acted differently it would have admitted that there were reasons for this distrust.

The question having thus arisen and being settled in the only way possible consistent with military discipline, a full amnesty seemed to open the way for subordination to the command, and to put a fitting end to the problem. Unfortunately such has not been the case, and the trouble has been resuscitated with political and revolutionary assistance, causing harm to the nation which it will be difficult to undo. This serious relapse demands harsher treatment, and, apart from which that with strict legality and firmness will be applied in the cases under consideration by judges and military courts, the whole corps must be carefully cleansed, separating from it and removing from all contact with it those who have debased all that it prized and the essence of its spirit and virtues.

Doubtless public opinion reserves its most severe judgment for politicians and agitators who have endeavoured to take advantage of the unrest in part of the army to further their ambitions, and for the artillery officers who have not shown judgment, prestige or experience in defending the good name of the corps.

As to the situation of the Government, it will be daily stronger according as the difficulties it has to meet are greater. It came into power to clear the horizon, and believes it has kept the atmosphere clean and bright during 5 years, and it intends to regain that atmosphere quickly and energetically. Only when it has finished the self-imposed mission of establishing a constitutional régime of a special type, supported by a true plebiscite, in an active but peaceful environment, and in the well ordered practice of citizenship, then only will it resign to the country and the King the powers it received from both and which it considers most distinctly ratified in these difficult days. It will then submit its action to the full examination of the first Constitutional Parliament established. By this happy day the exhibitions will be over ; the public Treasury will have consolidated by the liquidation of the 1929-30 Budget and the presentation of the estimates for 1931-32, its present prosperous position to the point,

possibly, of including in the latter and successive estimates the remaining obligations of the Extraordinary Budget until they are completely incorporated. The public works, now in progress, will be exploited and giving a return ; social and military discipline will have recovered from the sharp transitory attack from which they are now suffering, and the country will have recovered in the opinion of the world the prestige which it enjoyed before these days of unrest. The Spanish Dictatorship, like those of Italy, Portugal, Chile and others, knows its duties and is disposed to fulfil them rather than degrade by weakness the glorious mission corresponding to it in the history of the life of the nation.

Although nothing much has happened up to the present, yet it would have been sufficient to bring about the fall of any other form of government, with a return to the state of intrigue, &c., which formerly reduced the country to such a state of disorder and loss of prestige. " God will not permit that this time things should return to such a state."

The note concludes with a few words of exhortation to the artillery officers who have not offended. It states that it understands the pain caused by the measure it has taken of separating them from their corps, commands and appointments for a few months, a few days, or possibly only a few hours ; but this measure was indispensable in view of such indiscipline and revolutionary tendencies which demand a definite and public confirmation of loyalty to those in power.

The Government believes that those who, by letter, swear allegiance will be the first in future to prevent any act or conversation which would weaken military doctrine, and by breaking away from harmful *camaraderie* will be united by stronger ties, purified by the vision they have seen of the harm inflicted on the country, and by a sincere and loyal sacrifice of *amour propre* which, in order to make amends, they offer by submitting entirely to the orders of this Royal Decree.

The Government stresses its desire to put an end to this chaotic state of affairs regarding the artillery officers, and, while applying those measures which, to the artillery must appear strict, appeals to the spirit of citizenship and military sense of its officers to fulfil their duties to the " Country, the King and the Government".

ARTILLERY CADETS DISBANDED.

On 27th February King Alfonso signed a decree returning to civilian life the entire cadet corps at the Artillery Academy of Segovia. This extremely severe measure, which deprives of their careers youths some of whom have spent five years in the Academy, has caused a profound impression.

The reasons given for this decision are that it is necessary to destroy utterly at its birthplace the absurd mentality professed for the past half-century by the artillery officers, who placed the engagements taken on leaving the Academy to observe the artillery traditions as regards refusing promotion on merit above the King's regulation, and even the oath of allegiance to the flag. This mistaken *esprit de corps* sedulously fostered at Segovia has gathered in recent years intensity, and the Government considers it necessary to destroy it. The Academy at Segovia will be re-opened with cadets from the General Military Academy at present in course of formation at Saragossa, where they will have spent two years, so that there will be an entirely new class of candidates in whom the Segovia spirit will have no place.

As a matter of justice, the decree provides for indemnities to be paid to the families of the Segovia cadets on a descending scale, from 8,000 pesetas (£266) for cadets of five years' standing to 4,000 pesetas (£133) for cadets of three years and below. Moreover, certificates of studies will be handed to the cadets which may serve them as diplomas to obtain situations in their civilian careers; also the years quæd in the Academy will count as military service in respect of the general law on obligatory service.

The decree is an additional proof of the Marques de Estella's determination to re-establish discipline in the army, and makes the military forces subservient to the civil executive power.

TUNISIA.

DEATH OF THE BEY OF TUNIS.

Sidi Mohamed el Habib, the Bey of Tunis, died in Tunis this morning at the age of 71. His Highness has been on the Throne of Tunis since 10th July, 1922, and is now succeeded by his cousin, Sidi Ahmed.

Sidi Mohamed el Habib was the son of Sidi Mohamed el Mamun and grandson of Sidi Hasin, who was Bey of Tunis from 1855-59. The ruling house of Tunis is of Turkish origin, being descended from a Turkish soldier who had taken part in the conquest of Crete from the Venetians, and it follows the Ottoman rule of succession in accordance with which the senior agnate succeeds to the throne. Thus the late Bey's predecessor, Sidi Mohamed en Nasr, who died in 1922, was only 3 years his senior, and the new Bey, Sidi Ahmed, is only 3 years his junior, being now in his 68th year. The new Bey is brother of Sidi Mohamed el Hadi, who was Bey of Tunis from 1902 to 1906, and son of that ruler's predecessor, Sidi Ali, who reigned from 1882 to 1902 in succession to his brother, Sidi Mohamed es Sadok (the son of Sidi Hasin, grandfather of the late Bey), who accepted the French Protectorate on 12th May, 1881, by the Treaty of Kassar Said, which was completed by his successor by the convention of 8th June, 1883. The new heir apparent is Sidi Ahmed's cousin, Sidi Mahmud, who is 6 years his junior.

The late Bey was a man of great culture who was much interested in music and painting. He composed a hymn in honour of Muley Yusuf, the Sultan of Morocco, whom he had met in France in August, 1926, and painted portraits of President Millerand and M. Saint, the French President-General, with whom he always collaborated effectively in loyal acceptance of the French protectorate. His Highness was much interested in the development of public works in his dominion.

TURKEY.

THE ANATOLIAN RAILWAY.

Negotiations, which have been in progress for some time between the Turkish Government and the Anatolian Railway Company, have now been brought to a successful conclusion. The Turkish Government have agreed to pay in Swiss francs on a general 50 per cent. basis the interest on the debentures and shares of the Anatolian Railway Company, the subsidiary Haidar Pasha Port Company and the Adana-Mersina Company, arrears being repaid without interest in 25 annuities as from 1933.

In return, the Turkish Government acquire final and complete ownership of the line and of the property belonging to it. At the

same time the Government obtain the rights which the Haidar Pasha Port Company possess in the harbour of Alexandretta. These rights do not appear to be of much value, but the Turkish Government may be intending to make use of them in the negotiations with France over the Syrian frontier.

It is stated that the total payable by Turkey is 150 million Swiss francs, the maximum annuity being 15 million Swiss francs for 4 years, followed by decreases until the total sum is redeemed.

This settlement seems to be an important step towards the financial reconstruction of the country, and no doubt it will be approved by the Assembly and ratified in due course.

NEGOTIATIONS BETWEEN THE FORD CAR COMPANY AND THE TURKISH GOVERNMENT.

The Ford Car Company has now completed its negotiations with the Turkish Government for the establishment of an assembly factory in a free zone within the limits of the port of Constantinople. The principal provisions of the agreement are as follows :—

- (a) The site of the factory will be treated as a free zone for the erection or assembly of motor cars, tractors and aeroplanes. All machinery and plant, together with constituent parts will be exempt from the payment of all duties and taxes.
- (b) Motor cars, tractors and aircraft, or other material introduced into Turkey from the free zone will pay the normal customs duties and taxes.
- (c) The Turkish Government will pay to the factory a bonus of 30 dollars on every car and tractor imported into the country from the free zone.
- (d) The zone will be created at Tophane and the concession will have a duration of 25 years.

The Company hope to employ 80 per cent. of Turkish labour from the start and to increase the proportion before long to 90 per cent. The daily output of cars, starting at 50, should attain the figure of 150 after a year's working ; the factory will be fully established 9 months after the free zone is taken over.

The Ford Company will transfer to Constantinople their installation which is now at Trieste, and Constantinople will then become the distributing centre for Italy and Russia as well as for the Near East.

It is noteworthy that so big a firm should have selected Constantinople as their distributing centre. For some time inquiries have been made at the Piraeus and Varna as well as Constantinople, in order to decide on the best distributing centre; the selection of Constantinople may point to a revival of its activity as the main distributing centre of the Near East. For some time there has been a tendency for firms to transfer to the Piraeus from Constantinople, but the Ford Company's example may have the effect of carrying other firms in their wake.

No doubt the establishment of this factory will be a considerable help to the Turkish army in providing it with mechanical transport. At present, imported American cars are in a vast majority in the country, and the establishment of the Ford Company's factory in Constantinople, should provide a certain source for mechanical transport required by the Turks.

It remains to be seen what effect the manufacture of tractors and aeroplanes will have on other countries who are competing to provide these machines for the Turkish army.

UNITED STATES.

REORGANIZATION IN THE CAVALRY.

It is intended that cavalry divisions shall take the field in the first instance at peace establishments. These are approximately half the war establishments and it is considered that to double the strength of cavalry units on mobilization by the introduction of imperfectly trained men and animals would be prejudicial to their efficiency to an extent not compensated for by the increase in numbers. Units are to be brought up to war establishments gradually as trained reinforcements become available.

Owing to this somewhat singular decision it becomes necessary to study the new peace organization of the cavalry division and to compare it with the war organization.

The following table permits a rough comparison to be made :—

	Peace establishment.	War establishment.
Cavalry division—		
Total strength (approximate) ..	5,000	9,800
Number of cavalry brigades in a cavalry division ..	2	2
Number of cavalry regiments in a cavalry brigade ..	2	2
Cavalry regiment—		
Total strength (approximate) ..	730	1,440
Number of squadrons in a regiment ..	2	3
Machine guns in a regiment ..	8	12
3.7-mm. guns ..	2	3
Cavalry squadron—		
Total strength (approximate) ..	290	360
Cavalry divisional artillery—		
Number of battalions ..	1	2
75-mm. guns ..	12	(1 regiment) 24
Armoured cars ..	12	36
	(1 troop)	(1 squadron)
Cavalry divisional train—		
Number of M. T. companies ..	2	3

War Establishment tables have also been produced for a cavalry corps. This formation, which only exists in war, will contain two or three cavalry divisions and corps troops. It is stated that its normal rôle will be to "operate as a strong mobile force of all arms in carrying out special missions of reconnaissance and combat."

As regards further mechanization, it is stated that the policy will be "to adopt motor equipment to the greatest extent possible, so long as each piece of motor equipment adds to the mobility of the cavalry and does not interfere with its ability to go over any kind of country, and under any conditions of road and weather . . . it is believed that the horse-soldier, like the foot-soldier, cannot be replaced by any machine as yet developed, nor is it anticipated that any such machine will be developed. So long as there are marshes to cross, rivers to swim, woods to pass through, or mountains to climb, just so long will the cavalryman and the infantryman be necessary." It may be added that feeling is strong throughout the American Army against belittling the value of the cavalry arm. During Field-Marshal Lord Allenby's recent visit to America, the army officers who met, or heard, the Field-Marshal, were greatly elated at his reference to the future of cavalry; more especially as they regard him as the outstanding cavalry leader of the war. None of the speeches which he made during that visit were more popularly

received than those in which he referred to the feats of the cavalry in the war, and the value which it is likely to have in the future.

EXPERIMENTAL ARMoured CAR TROOPS.

The armoured car troop which recently took part in training with the Experimental Mechanised Force at Fort Leonard Wood, and which is at present the only armoured car unit in the army, has made a march of 2,300 miles from Baltimore to Fort Bliss, Texas, where it will join the 1st Cavalry Division. Demonstrations were given at the Service Schools at Fort Leavenworth and Fort Reilly *en route*.

The troop is stated to be organised as follows :—

Personnel—

2 officers.

50 other ranks.

Vehicles—

1 armoured command car.

1 light armoured car.

4 medium armoured cars.

4 experimental armoured cars.

2 cargo trucks.

2 experimental solo motor cycles.

The only armoured cars with regard to which any details have as yet been received are the light "Pontiac" and the medium "La Salle."

THE NATIONAL GUARD.

Figures recently published indicate that there were more officers enrolled in the National Guard at the close of the fiscal year 1928 than at any other time since the war. On 30th June, 1928, there were 12,244 officers commissioned in the National Guard, of which 4,932 were in the infantry and 2,317 in the field artillery.

The enlisted strength of the National Guard for the same date was 168,793 as compared with 168,950 for the year 1927. In enlisted strength also the infantry leads all branches of the service with a total of 90,678.

Note.—The National Guard is the term applied to the Militia of the various States when it is embodied for service under the Federal Government. The force bears a resemblance to our Territorial Army, but there are several important differences between the two organisations.

STAFF EXERCISES IN TEXAS.

A staff exercise on a larger scale than any which has been held hitherto since the war took place on the VIIIth Corps Area on the Mexican border from 22nd to 25th October.

The scheme dealt with: the advance from the coast about Galveston of four Blue Armies each consisting of approximately eight divisions, opposed by three Red Armies concentrated about Kerrville and Marble Falls.

The operations of the First Blue Army, which was concentrated in the area San Antonio—Fort Sam Houston, were alone considered in detail. Army, Corps, Divisional and Aviation Staffs of this Army were represented by about 400 officers in all who had been assembled for the exercise.

Signal communications were supplied by regular and National Guard personnel, and headquarters functioned in the actual positions which they would have occupied on service. The Air Service furnished a number of aeroplanes for reconnaissance, the Red Army being represented by flags, flares, &c.

The objects of the exercises were as follows :—

- (1) To study the handling of the higher formations during the approach march.
- (2) To practice staff duties, particularly the preparation of orders and reports.
- (3) To practice co-operation between ground and air.

Brigadier-General A. J. Bowley, Acting Commander of the VIIIth Corps, directed the exercise. In his address at the opening conference he commented on the fact that this exercise dealt with the staff work of a force which amounted, all told, to about 800,000 troops, and he emphasised the importance of studying methods of handling such large bodies in view of the fact that the United States Army is being trained to-day for a war of the first magnitude in which the whole resources of the nation will be required to play a part.

THE REMOUNT SITUATION.

A shortage of horses and mules is causing considerable anxiety to the War Department.

Peace Establishments allow for a total of 56,000 animals. In the interests of economy this allowance has been reduced temporarily to 44,100 but it has been found impossible even to work up to this figure. The situation is regarded as the more serious because the average age of animals in the Service is unduly high, approximately 17 years. This is due to the fact that a large number of horses purchased during the war have not been replaced.

MILITARY TRAINING.

The Secretary of War, in his annual report for 1928, reviews the progress made by the National Guard, the Organized Reserves, Reserve Officers Training Corps, and The Citizens Military Training Camps.

National Guard.

The National Guard is stated to have attained its highest measure of efficiency in the peace time history of this organization. It is now more highly organized, more completely equipped and more thoroughly trained than ever before. An important factor which has contributed to the increased efficiency of the National Guard is the fact that during the past 4 years 1,499 officers and 514 enlisted men of that organization have attended Regular Army schools. After stressing the importance of the National Guard as an agency of national defence, the Secretary of War goes on to say: "It readily can be seen that the National Guard has reached a most desirable point of stabilization. The aggregate strength on 30th June, 1928, was 181,221, as compared with 177,428 on the same date 4 years ago." He states that the National Guard is now capable of meeting any demands which may be made upon it within the various States, and that it is fit to take its place in the front line of defence in any minor emergency necessitating the early employment of troops in excess of the Regular Army. Also that it is fit to mobilize and train its own recruits for an emergency demanding the exercise of the full manpower of the nation.

Organized Reserves.

These are reported to have reached a strength of 120,288 on the last day of the fiscal year 1928. Of its components the enlisted reserve corps total 5,464, and the officers reserve corps 114,824,

including 9,765 officers of the National Guard who also hold commissions in the Officers Reserve Corps. There has been little change in the strength of the Enlisted Reserve Corps, but the Officers Reserve Corps has increased by 36,970 during the past four years. Of this number some 20,000 have been graduates of College Units of the Reserve Officers Training Corps.

Reserve Officers Training Corps.

The numbers in the Reserve Officers Training Corps totalled 112,349 at the close of the 1927-28 school year. Financial considerations have limited the maximum in it since 1924, so that numbers have remained practically the same for the last four years, which have been utilized for consolidation and improvement of the corps and special selection of the instructors, who are mostly graduates of the Regular Army Service Schools.

During these four years 22,981 college and university students have graduated from the Reserve Officers Training Corps, of whom 20,941 accepted commissions in the Officers Reserve Corps. In effect the Organized Reserves are being fed from the Reserve Officers Training Corps at the approximate rate of 5,000 each year with young officers of high intelligence and a good foundation of military knowledge.

Citizen's Military Training Camps.

During the four years ending 1928, applications for these camps were received from 221,000 youths, of whom only 143,000 were admitted owing to financial stringency.

In recent years there has been a continual increase in the percentage of applications from youths in urban districts, as compared with those from farms and small towns.

There are now 52 annual camps in 34 states of the nation; the majority are held in the vicinity of Army posts. Labour and Capital both encourage the camps, and all religious denominations have given active assistance. The report is particularly enthusiastic about the success of these camps, stating that they have far exceeded the fondest expectations of those demanding full recognition of this project in the National Defence Act, 1920.

Thus, in the case of each of these reserves to the regular military strength of the U. S. A., there appears to be no lack of popular enthusiasm.

Juvenile Military Education.

For a comparison of juvenile military education in Italy, Great Britain, U. S. A. and Japan, *see* Italy.

TRANS-ISTHMIAN CANALS.

On 17th December, 1928, the Senate discussed a resolution which has been pending for some time to authorise a completed survey of the proposed Nicaraguan Canal, as well as to provide further information as to the practicability of increasing the facilities of the Panama Canal. Although the debate did not disclose any novel developments in the situation, a brief resume of the principal arguments advanced is of interest.

The Panama Canal.

Since this canal was opened in August, 1914, the traffic passing through it has increased at a rate considerably in excess of all estimates. The following figures give an indication of the position :—

Fiscal year.	Number of ships using canal.	Tonnage paying tolls.
1915	1,075	3,792,572
1921	2,892	11,415,876
1927	5,475	26,227,815
1928	6,456	29,458,634

It is now estimated that the canal is dealing with approximately 50 per cent. of the maximum tonnage which it can handle as constructed at present. It is improbable that traffic will increase in future in the same proportion as it has done in the past, but, basing calculations upon a most conservative estimate, it is evident that within approximately 12 years the canal will be working to maximum capacity.

There are two means by which existing facilities could be increased : first, it is possible to augment capacity during the dry season by providing a supplementary supply of water ; and, secondly, the construction of a third flight of locks is contemplated. These two measures combined would cost about 150,000,000 dollars and would raise the maximum capacity of the canal to approximately 100,000,000 tons per year.

It would only be possible to obtain a greater capacity than this by transforming the canal into a sea-level passage at an immense cost which has not even been estimated.

The Nicaraguan Canal.

The proposed route enters from the Atlantic Ocean by the San Juan River between Nicaragua and Costa Rica and crossing the Lake of Nicaragua joins the Pacific Ocean at Brito—a total length of 183 miles as compared with 50 miles in the case of the Panama Canal.

There has never been any doubt as to the practicability of the construction of this canal from an engineering point of view; in fact the Isthmian Canal Commission of 1901 recommended to Congress the Nicaraguan route in preference to the Panamanian. In particular the danger of land slides which have caused so much trouble on the Panama Canal would appear to be less serious.

The principal economic advantage to be derived from the construction of the new canal is that it would shorten the route from the East coast of the United States to the West by approximately 200 miles. Further, the increased facilities afforded for inter-oceanic traffic might be expected to react favourably upon trade between the United States and Latin America.

During the debate certain diplomatic advantages were claimed. It was pointed out that in the past the United States had been constantly involved in diplomatic differences with Colombia and Panama which were speedily terminated by the construction of the canal. The hope was expressed that the new canal might solve for all time the thorny problem of relations with Nicaragua. When Mr. Hoover visited Nicaragua in November last the new President of that country, Senor Moncada, described the proposed canal as a project "which would combine your country and ours and be a bulwark of freedom and a demonstration of liberty." To an unbiassed observer this statement appears somewhat ingenuous.

The strategical advantage which would be conferred upon the United States by the existence of an alternative route between the Atlantic and the Pacific is sufficiently clear to require no elaboration. The point was given prominence during the debate.

RE-INTRODUCTION OF FULL DRESS UNIFORM.

A regulation has been issued authorising all ranks of the army to wear blue full dress on special or social occasions. Purchase of the uniform is to be optional and it will not be worn on parade. The specifications of the new full dress differ slightly from those in force in 1915.

CORRESPONDENCE.

MORE POLO NOTES.

SIR,

In the April number of the journal GOPTI suggested a scheme of handicapping polo ponies as a means to reviving polo as a general game in India. Though he maintains that there are still many people who have not lost their sense of proportion and who look on station polo and local tournaments as the game proper, there can be little doubt that their members are getting fewer every year and unless something can be done polo as a real game will die.

It may not be generally known that this tendency was foreseen before the war and a scheme for handicapping ponies was proposed at both the Indian Cavalry Meeting and the Meeting after the Infantry Tournament. At both meetings the proposal that the scheme should be recommended to the I. P. A. for adoption was carried by a show of hands. It was however subsequently decided that propaganda was necessary and that details of the scheme should be sent to all messes so that they should have the opportunity of careful examination before being asked to vote upon it. Then came the war and little has been heard of the scheme since. Its chief sponsor was killed and others interested probably considered that the game should be left to rehabilitate itself before any innovations were introduced.

The scheme was that all ponies should be handicapped in accordance with the price for which they last changed hands.

Rs. 1,000 or less	.. Nil.
Rs. 1,500 or less	.. 1 Goal.
Rs. 2,000 or less	.. 2 Goals and so on 1 Goal being added for every 500.

To avoid any interference with vested interests all ponies already registered to be handicapped nil for life. Sales between members of the same regiment or team not to effect the handicap of the pony.

In addition to preventing teams from swamping local tournaments by weight of ponies the scheme has the following advantage over the suggestion of GOPTI.

A player buys a pony for Rs. 1,000/- and trains it. It may play in all the major tournaments for years and be worth Rs. 4,000/- or more but his handicap remains nil until he is sold. The player therefore gets an advantage by playing ponies that he has trained himself. In this way the training of ponies will be encouraged whereby the supply of trained ponies will be increased. By the laws of economics this will lead to a reduction in price and an increased demand i.e., more players.

The detailed working of the scheme would be as follows :—
All sales would have to be registered with the I. P. A. The buyer would obtain a form from his local committee on which the details of the sale with the price paid would be entered and vouched for by the signatures of buyer and seller and the president of the local polo committee. This would be forwarded to the I. P. A. with a fee calculated to cover the cost of extra clerical establishment, printing etc., which the scheme would entail.

At first sight it would appear that this would give great scope for roguery and that A would sell a pony to B for Rs. 1,000/- and take Rs. 2,000/- for the saddle.

Admittedly we are all horse copers but it is extremely unlikely that both A and B would be prepared to sign a false certificate to enable B to obtain an advantage in small local tournaments (in major tournaments the pony's handicap would not matter).

Furthermore a still greater deterrent would be that such a transaction would adversely affect B's pocket as should he want to sell the pony a year later he would not have the face to ask Rs. 3,000/- for a pony for which everyone would know he had only paid Rs. 1,000/- as a trained pony a year before.

Another disadvantage that has been suggested is that it would reduce the general standard of ponies in the country. This will not be so. The major tournaments will be played as they are now and the best ponies will continue to fetch high prices from those who wish to compete in open tournaments. The handicapping of players did not reduce the standard of their play so why should the handicapping of ponies.

Then remains the question of the line pony, the seven-eighter. These would be handicapped by local committees in accordance with

the tournaments they have played in on the lines indicated in the scheme suggested by 'GOPTI!'

In conclusion it is claimed that whatever one may think of the chances of the scheme doing good it cannot possibly do harm. Though the handicaps will exist there is no intention of making clubs use them if they don't want to. Clubs will of course be encouraged to frame the conditions of their tournaments so as to bring teams with high priced ponies to the level of teams with low priced ones but there will be no compulsion, just as there is no compulsion to use players handicaps.

If the scheme were adopted it would probably be necessary to modify the actual prices given above to ensure that the raw pony had a nil handicap. The price therefore would have to be settled with the shippers, but the principle would remain the same and it is contended that the principle is sound.

Yours faithfully,

"NAKIS."

POLO.

DEAR SIR,

In the April number of the Journal of the United Service Institution of India, a correspondent puts forward a scheme to increase the number of polo players in India by means of a system of handicapping ponies so that smaller animals may compete on more even terms with the general run now playing. Before dealing with the merits of the proposal it is desirable to discover if a supply of small ponies, say genuine 14'1, exists or can be created.

Let us start in India—The motor has almost abolished the horse or pony of 25 years ago, kept by the majority of officers civil and military as a means of transport whether under saddle or in some form of wheeled vehicle. There may be more officials in India now but the number obliged to keep horses is distressingly small. It is even officially permitted to divert charger allowances to the upkeep of a motor car in many military appointments.

Formerly Indian breeders produced ponies and horses for sale as remounts or for general transport purposes such as tongas, hackney

carriages and privately owned carriages as well as for their own use. At the present time breeding is practically dead except (a) in the Canal Colonies, where it is subsidized and where the Remount Department aims at the production of animals of at least 15 hands and (b) over a broader area as regards a very poor type used for local pack and riding purposes or for tongas in which we now find miserable half-starved animals. A census of the number of animals classed as horses is wholly misleading unless one takes the trouble to discover how poor the vast majority of them are. There are not enough remounts bred in India for the Army as can be judged from the number of horses (and mules) now imported from overseas.

To go further afield you can't get many 14'1 ponies in Australia and it is unlikely that anyone there would waste time and money breeding that particular type when it is remembered that at the present moment no one in Australia finds it worth while to breed horses of any particular type for the Indian market.

It may be possible to get a limited number of Arabs of the 14'1 type but here we come into competition with the Iraq Army and with racing interests. It is therefore safe to assume that only a very meagre supply of small ponies exists.

To examine the reason for the gradual increase in height of polo ponies from 13'3 to 14'1 and then to an unlimited height induces the belief that it was largely a matter of supply and demand. Each successive increase opened up the field of device until we have at present an unrestricted choice from all horses. It is well known that the last existing standards of height both in England and India became practically non-operative owing to laxity in applying them. Mr. Milburn, in the April 1929 number of Polo points out that the Americans were not impressed with the efficiency of a standard (fixed at 14'2 in England) when there were plenty of animals of 15 hands playing polo, and consequently, the Americans discarded all ideas of measurement.

If polo is to be encouraged in the sense of attracting recruits to the game it seems reasonable to allow them mounts from wherever they can get them, rather than to attempt to create a new class small pony in the hopes that it will be cheaper.

The re-introduction of measurement implies careful control by the governing body of polo, the provision of measuring standards and the registration of ponies measured. Measurement affecting handicaps whether in polo or racing is a thing that has to be done most carefully by selected officials and not, as regards polo, left to be carried out haphazard on the eve of a polo tournament.

To consider the actual working of a polo tournament in which ponies as well as players are handicapped innumerable difficulties arise. Take for example a four chukker tournament in which 12 ponies per team are allowed—The aggregate handicap of the ponies actually played by any one team would be known only at the end of the last period in each game of the tournament. A team might well elect to play only 8 ponies so as to profit by the handicap, but may reserve the right to play more than 8 and thus introduce complications in deciding what goals were to be given.

Apart from the above obstacles does not a scheme of handicapping ponies act unfairly against beginners who wish to mount themselves well and more unfairly still against individuals who happen to be in the lower grades of the game but who from time to time lend their ponies to Regimental teams for use in first class tournaments ?

It is contended that the only restrictions that can be introduced to encourage beginners are those already in existence relating to low aggregate tournaments. Rules and regulations which exclude either players or ponies from local tournaments must be wrong at a time when the chief difficulty lies in getting enough players to make up teams.

It has become fashionable to run down high grade polo in some quarters. It is an expensive game and if poor men take it up they are compelled to work at it to make both ends meet. Small blame to them if they develop their game and their knowledge of horsemanship and training of horses to enable them to sell ponies well. We do not hear adverse comment as regards individuals who gain distinction as cricketers, tennis players, golfers, hockey players, etc.

Yours faithfully,

“Low Handicap.”

REVIEWS.

ARTILLERY: TODAY AND TOMORROW.

By

COLONEL H. ROWAN-ROBINSON, C.M.G., D.S.O., R. A.

(Messrs. William Clowes and Sons Ltd., London, 1928) 5s.

In this book Colonel Rowan-Robinson endeavours to show the trend of development in the Royal Artillery, basing his remarks on the assumption that "the British Army can and should be wholly mechanised."

But, as mentioned in a previous review,* owing to the limiting factor of finance it is and probably always will be impossible for any nation to "wholly mechanise its army." We think, moreover, that it is incorrect to say that "military opinion generally is in accord" with his assumption above.

Frankly, we feel that this book, though it deals with important military questions of the day, might well prove a positive danger in the hands of a young officer going up for his promotion examination. For instance, the author keeps on referring to "barrages" in open warfare without explaining where the guns and ammunition are to come from; he harps on visual control of massed artillery by a C.R.A. "in the air" (quite so!) he says that "the pace of approach (of mechanised units) may be anything from 20 to 80 m.p.h." Shades of DAYTONA BEACH!

It is so easy to make sweeping assertions, to utter didactic *clichés*—even politicians and stump orators have been known to do so. But, presumably a military book is written as a definite, reasoned opinion on the part of the author and not for purposes of circulation or sales. It therefore behoves military writers to be careful in their statements and to consider the effect of their ideas on the mind of the junior seeker after knowledge.

We join issue with the author on his remark that "in a campaign on the continent.....our four Divisions in their present form would not be of serious value." We seem to remember a certain War Lord saying this in 1914.....Our long service and highly trained army, the type of soldier Great Britain produces and the moral effect alone will in the future, as in 1914, make our Expeditionary Force a valuable asset in any war of nations.

* U. S. I. Journal, April 1929 "Some aspects of mechanisation."

The author may be correct in stating that "aircraft attack is the most serious menace with which Great Britain is confronted." There are many, however, who think otherwise. The difficulties of maintaining such an attack, the certainty of retaliation, the uncertainty of effect, the repercussion in neutral states (to mention a few factors) make it at least doubtful whether air attack on a large scale will be attempted.

As regards nomenclature, we fear the author has put this chapter in as "padding." There is no confusion in artillery terminology. After all, we are an illogical and un-standardised race; we prefer pounds, shillings and pence to the decimal system of coinage.

Probably more has been written about anti-tank defence than on any other single matter since the war; and perhaps the correct solution will not be discovered till war comes and the capabilities of tanks in the attack over all natures of ground are properly tested. But, it seems that the least likely solution of all is the one of which Colonel Rowan-Robinson says that "there is only one which offers any real prospect of success and that is the employment of the artillery, either as a whole or in groups, under control from the air." We would ask 3 questions:—

- (a) Can artillery with indirect fire and air observation compete with tanks swarming in extended order, "jinking," altering pace, etc.?
- (b) How much ammunition is it worth while expending when "browning" an area, and will that ammunition be available and replaceable in open warfare?
- (c) Will there ever be enough field guns to switch on to massed anti-tank fire at the expense of their other duties?

Surely, the most likely solution is to allot infantry their own anti-tank means of defence, as is visualized in the new battalion organization.

The author is at his best on pages 72 and 73. He proves conclusively—to himself—that with a mechanized Field Army "we shall be able to consider the air peril eliminated." He points out dramatically the terrible danger to aeroplanes if they dare to molest hundreds of mechanical vehicles in motion—but he forgets to state what happens when they stop!

The specious remark that "India is likely to prove the main stumbling block" will interest (and amuse ?) officers in this country. Actually, (*c. f.*, page 44) "the need for supplanting the horse by the 6-wheeler" has appeared so urgent to the Indian Government that it has embarked on a comprehensive programme of mechanising trains and certain other units such as Medium and Field Brigades, R. A., Field Ambulances, etc. India rightly had the motto "*festina lente*" until the possibilities of the 6-wheeler were adequately proved, but she then changed to "*Fiat* (or Morris, Guy, Leyland or any good 6-wheeler) *instantier*." We are happy to agree with the author in this !

We no doubt will be accused by the author of being "die-hards of the bow and arrow school." So be it. We prefer to visualise future war under those conditions rather than in the epoch when the C. R. A. will have wings and his head in the clouds : when the Divisional Commander, speed king of speed kings, breaks his own record across country of 80 m. p. h. followed by his staff moving at a mere 79 : when Gunner St. George is once again called on to destroy hundreds of dragons in order to succour that unfortunate damsel, Miss P. B. I.

HODSON'S HORSE 1857-1922.

By

MAJOR F. G. CARDEW, O. B. E., BLACKWOOD, 21s. NET.

This is an important book. It must rank amongst the half-dozen best Indian regimental histories, and it merits being placed beside such works as the histories of the two senior Gurkha regiments written by Colonel Shakespear and the late Mr. Loraine Petre. Major Cardew acknowledges the assistance and advantage which he has derived from the recollections, communicated at first-hand, of various officers who knew Hodson and who themselves had some part in the raising of the regiment. Amongst these he names the late General Sir Charles Gough, V. C., who died in 1912, and his brother General Sir Hugh Gough, V. C., who died three years earlier. It is evident too that much is due to the aid of Major V. C. P. Hodson, who as a subaltern wrote the history of the Governor-General's Bodyguard and whose monumental "List of Officers of the Bengal Army" is now in course of publication.

The text is divided into three main sections ; the first dealing with the raising and services of the three regiments of Hodson's Horse in the Mutiny ; the second, with the story of the 9th H. H. from 1859 to 1922 ; whilst the third gives an account of the 10th H. H. during the same period. There are six appendices, of which the one containing biographical notices of commanding and other officers, British and Indian is especially welcome. The illustrations are nine in number ; and particular praise is due to the wide range of maps—not just sketch-maps but no less than fourteen proper, accurate, useful, *real* maps. And all this for a guinea ! It would be cheap at twice the price. The author, the publishers, and the Regimental History Committee are to be congratulated.

When the old Bengal Army revolted in 1857, "the first to be raised and foremost in distinction among those new corps which, in the hour of our need, were recruited from our old adversaries of the Khalsa was the regiment of horse which was organised by Lieutenant W. S. R. Hodson of the 1st Bengal European Fusiliers in the camp before Delhi, which was led by him through some of the most stirring scenes of the next eight months, and which ever since his death at Lucknow in March 1858 has been proud to bear his name." Major Cardew has made the system by which the regiment was raised very clear, and has gone into the constitution of the fourteen original "Rissalahs" in interesting detail. Hugh Gough (set free by the mutiny of his regiment the 3rd Bengal Light Cavalry, previously one of the most distinguished regiments of the Old Bengal Army) joined as adjutant at the end of July 1857 ; and of this period we are given one of the most interesting actual photographs of the Mutiny which it has been my fortune to see, in the illustration (p. 41) of "Hodson with some of his officers." It would be interesting to know the provenance of this photograph, which is not stated : I do not recollect having seen it reproduced before. The other well-known Mutiny photograph—the Sirmoor battalion at the Sammy House—is tame by comparison.

Space does not permit of our following the fortunes of the three regiments of Hodson's Horse throughout their operations against the mutineers. The narrative appears to be an accurate and vivid one, though I cannot find any record of the exploit of the 3rd H. H. in April 1859, when they recaptured the colours of the 15th Bengal Native Infantry (which had mutinied at Nasirabad at the end of May 1857) when pursuing some rebels in Gonda District. This probably occurred

during the affair of the 13th April, which is duly recorded by Major Cardew. The 3rd H. H., by the way, though disbanded in 1859 may fairly lay claim to be the progenitor of "Fane's Horse," the 19th K. G. O. Lancers, to which it contributed a large contingent when it was raised.

Nor is it necessary to describe at any length the distinguished service of the 9th and 10th H. H. from 1859 to 1922. The 9th served in the Suakin expedition of 1885, and during the Great War in France and Palestine. The 10th took part in the Second Afghan War and during 1914-20 in the Mesopotamian campaign and the Arab rebellion. The account of their doings during this period is by no means of "parochial" interest only—it is as readable by the Services in general as is that extremely lively history of the Scinde Horse with which some readers are no doubt acquainted.

Into those much-disputed questions of Hodson's character and conduct—the trouble over the Guides' accounts, and the shooting of the princes—I will not enter here; but they are treated in an eminently fair and unbiassed manner by the author. I have read, I think, most of the published material regarding both incidents; and I have formed my own opinion on both. I will only say that I do not cavil at one word of Major Cardew's. But it is surprising to find that another matter—the execution of Risaldar Bisharat Ali, I. O. M., 1st Bengal Irregular Cavalry—does not even receive cursory mention, since it has formed the subject of acute and prolonged controversy between Trotter and Rice Holmes.

To sum up—a first class regimental history and a book for all officers of the Army in India to read.

THE HISTORY OF THE SUFFOLK REGIMENT, 1914-1927.

By

LIEUT.-COL. C. C. R. MURPHY, HUTCHINSON, 30s. net.

Into one volume of some 430 pages Lieut.-Col. Murphy has compressed the war and post-war history of 23 battalions of the Suffolk regiment and 6 battalions of the Suffolk Volunteers. The book is well printed (though thinner paper might have been used to advantage): rather dear: and according to the publishers "blurb" on the dust jacket is "profusely illustrated". With the last claim one must join issue—there are in all six illustrations proper and ten

portraits, a very modest collection for such a large and important volume. The maps are two in number, a fairly good sketch-map of Malabar and an "end-paper" of France and Flanders which is of very doubtful utility to anyone.

Bearing in mind the extent to which the material has been compressed, it is remarkable how much detailed narrative, of a readable character, has been included. Applying the test of "readability" to the various battalion narratives, each is concise, clear, and in more than one case of considerable literary quality. The compiler has chosen—in the present case, wisely—to incorporate most of his information regarding casualties and rewards in the battalion narratives rather than in appendices. The result is satisfactory, largely owing to the very full index which has been provided.

To the general reader the portions of principal appeal will be the short foreword contributed by General Sir Horace Smith-Dorrien to the chapter on Le Cateau; the chapter by Major Cooper on the Suffolk Volunteers, which throws much light on an organization concerning which too little has been published; and the story of the 1st Battalion's doings in the Moplah rising.

THE 101st GRENADIERS: HISTORICAL RECORD OF THE REGIMENT, 1778-1923,

Second Edition, (Gale and Polden, 1928.)

The 1/4th Bombay Grenadiers are fortunate both in their historians and in their publishers. This well compiled and produced regimental history sets a standard which has hitherto been attained by few such histories of Indian Army units. The battalion was fortunate in having, as a basis to work on, a useful history compiled by Brigadier-General (then Lieut.-Colonel) Anderson in the eighties, and the present work, which has been skilfully expanded and extended by Captain Frankland, is modestly announced as a "second edition" of the original record. The compiler has succeeded in clothing the bare bones of the regimental records with much attractive material drawn from such sources as Grant Duff's *History of the Mahrattas*; and has added to its appeal with excellent illustrations in colour, photogravure and monochrome.

Apart from its primary regimental interest, the book contains valuable accounts of Maiwand and Tanga ; an illuminating appendix on the use of the "White Horse of Hanover" as the time-honoured badge of grenadiers ; and a useful picture of the "Razforce" operations as recently as 1922-23. It has that very rare thing in a regimental history—a serviceable index ; and also maps, to the selection of which careful thought has evidently been given. The regiment is to be congratulated on its enterprise ; and those units of the Indian Army which have not yet printed post-war histories could not do better than study this book before embarking on the duty.

THE MURMANSK VENTURE

By

MAJOR-GENERAL SIR C. MAYNARD.

(*Messrs. Hodder and Stoughton, London*) 20s.

We consider that this book is one of the best of its kind it has ever been our good fortune to read.

The author says that he is "not writing for the military student," but we think that far more military knowledge can be gleaned from a correct study of this work than many others (so-called) treatises on war. The book does not deal with mass attacks, barrages, zero hours, etc., for the campaign itself was on a small scale compared with those we were used to in the Great War. Nevertheless, all the ingredients are available to illustrate the principles of war and this illustration is all the clearer in that, by virtue of the small numbers involved, the mind of the reader is not confused by unnecessary or irrelevant detail.

Perhaps the thing that strikes us most in this book is "the responsibility of the commander." The whole "venture" from start to finish was one continuous appreciation of a situation which changed rapidly from day to day, even hour to hour. The variety of factors was extraordinary. Politics, economics, finance, unique equipment, unusual climate, etc., all figured very importantly apart from the purely military tactics and strategy. The author tells a plain, unvarnished tale, he says "Here are the facts, here is how I visualised the situation, here therefore is what I did." We would recommend any young officer to read and see how logical deduction in the art of war should be made.

The author explains very clearly the reasons for our "intervention" in N. Russia and, in our opinion, proves his statement that the venture was more than worth while, in fact the correct use of a detachment. He states (which will be news to most of us) that we first went to N. Russia *at the invitation of Moscow* and that the clash with the Soviet only came about as the result of a change of policy on the part of Lenin.

In an unusual and most interesting chapter (which gives food for much thought), the author says that an army of 100,000 could have forced the Bolsheviks to abdicate and established a sane government; that, balanced against the harm done to the world since then by the Soviet, the cost of such a campaign would have shewn a credit, not a debit. This question must necessarily be speculative, the answer cannot be certain. We would, however, venture one or two thoughts. The vast size of Russia, the lack of communications, the hereditary apathy of the people, the indeterminate objective, the climate and terrain; the fact that campaigns of this nature (*e.g.*, Iraq, the Dardanelles, Palestine) have a habit of far outgrowing the original conception; the lesson of Napoleon and Moscow. All these thoughts rather incline us to doubt whether 100,000 men would have been enough and whether a decision (as opposed to a stalemate) could have been gained. We frankly admit, however, that we may not be in as good a position to judge as General Maynard.

It is impossible to touch on more than one or two points in a review of this nature and, with such a wealth of information and novelty, it is difficult to choose. One matter, however, is worthy of remark and that is the "bright idea" of the Treasury Official who thought seriously that a consignment of pickled herrings in Norway was just as good to pay the Russian workmen as hard cash in Murmansk! and we were the first nation to get back to the Gold Standard!

A point of interest to readers in India is the number of names mentioned which are well-known out here.

Finally, we would pay our tribute to the delightful English and the wonderfully descriptive writing of the author. As we read, we see before us the barren "tundra," the brooding forest and the bleak ugliness of the region, overcast by the evil, sinister shadow of Bolshevism.

We advise all who have not done so to get this charming and most readable book.



LLOYDS BANK Limited.

(Incorporated in England.)

Subscribed Capital	..	£ 73,302,076
Paid-up Capital	..	£ 15,810,252
Reserve Fund	..	£ 10,000,000

Head Office:

42, GRACECHURCH STREET, LONDON, E.C. 3.

Eastern Department:

14, KING WILLIAM STREET, LONDON, E.C. 4.

West End:

6, PALL MALL, LONDON, S.W. 1.

GENERAL BANKING & EXCHANGE BUSINESS
of every description transacted.

WORLD LETTERS OF CREDIT AND TRAVELLERS
CHEQUES PAYABLE THROUGHOUT THE WORLD.

Foreign Currency Drafts, Telegraphic & Mail
Transfers.

SAVINGS BANK ACCOUNTS—INTEREST @ 4%
PER ANNUM—WITHDRAWABLE BY CHEQUE.

Over 1800 Offices in England & Wales.

Agents & Correspondents throughout the World.

Branches in the East:

BOMBAY, CALCUTTA (2 Offices), KARACHI,
RANGOON, DELHI, SIMLA, LAHORE,
RAWALPINDI, MURREE, SRINAGAR,
GULMARG AND NEW DELHI.

Thos. Cook & Son, Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Passages engaged by all lines at same fares as charged by Steamship Companies. Holders of Cook's tickets met at all ports. Outward passages engaged and tickets supplied from any part of the world to India. Usual reductions obtained for Missionaries, Railway Officials, Families, etc.

Baggage received, stored and forwarded. Cargo shipped to all parts of the world at current rates. Inward consignments such as Hardware, Piecegoods, Machinery Stores, etc., for Messes and Clubs, cleared and forwarded at special rates. Insurance of all kinds effected on Baggage, Cargo, Livestock, Mess Property, etc.

The Oriental Traveller's Gazette containing sailing dates and fares of all steamers, together with invaluable information for travellers, sent post free on application.

Government Certificates accepted. No deposit required.

Thos. Cook & Son (Bankers), Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Current and Fixed Deposit Accounts opened. Interest allowed. Pay and Pensions collected. Periodical remittances made at current rates. Insurance premia paid.

Letters of Credit and Traveller's Cheques issued, encashable throughout the world.

Drafts granted and Telegraphic Transfers effected on all principal towns.

Insurance Life, Accident, Fire, Burglary, effected. Prospectus on application.

160 OFFICES THROUGHOUT THE WORLD.

EASTERN OFFICES : BOMBAY, BAGHDAD, DELHI, SIMLA, CALCUTTA, RANGOON, MADRAS, COLOMBO, SINGAPORE.



E. DUCKETT & Co

(By Government Appointment)

EAST STREET POONA

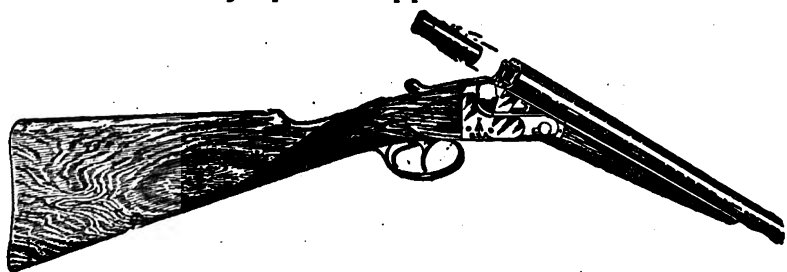
**MONUMENTAL SCULPTORS
POWER MACHINERY & TOOLS
ARTISTIC MEMORIALS IN SELECTED
MARBLE ERECTED ANYWHERE IN INDIA**

ELAHEE BUKSH & Co.,

ARMS AND AMMUNITION DEALERS,

== MEERUT AND KASHMERE GATE, DELHI ==

By Special Appointment



To H. E. the Earl of Reading, Viceroy & Governor-General.

LARGE STOCK OF

**Latest Model Shot Guns, Rifles, Pistols, Revolvers
and Ammunition.**

CHEAP AND RELIABLE

Shot Gun Cartridges! A Speciality !! Record Sale !!!

Illustrated Catalogue Free.

A useful compendium of information for all who have interests in Asia.

£ 1

ASIATIC REVIEW

5s.

per annum

per issue.

Each issue contains nearly 200 pages and is generally illustrated.

THE VERDICT OF THE PRESS.

ENGLAND. *The Times*: "The January issue brings that quarterly to the fortieth year of its steadfast devotion to the mission of providing a platform for information and opinion on Asiatic affairs—political, social, literary, educational, commercial, artistic and general.....many eminent names appear in the list of contributors."

U. S. A. *New York Tribune*: "A well-informed quarterly dealing with Oriental affairs."

FRANCE. *Les Dernieres Nouvelles* (Strasbourg): "La grande revue de Londres."

INDIA. *Bombay Daily Mail*: "Of special interest as affecting existing trade relations."

The following articles on India were published in the Review during 1927;—

India at the Imperial Conference by THE MAHARAJA OF BURDWAN.

The Indian Co-operative Movement, by Sir LALUBHAI SAMALDAS.

Rural India and the Royal Commission, by Sir PATRICK FAGAN.

*Post and Telegraph Work in India, by Sir GEOFFREY CLARKE.

*Indian Forest Administration, by W. F. PERREE.

*India's Cotton Problem, by H. A. F. LINDSAY.

*The Indian Navy, by P. R. CADELL.

*Lectures delivered before the East India Association.

THE REVIEW PUBLISHES IN FULL

THE PROCEEDINGS OF THE EAST INDIA ASSOCIATION.

NEW FEATURES:—

1.—THE ASIAN CIRCLE.

A SURVEY OF ASIATIC AFFAIRS.

(Published by arrangement in the *Asiatic Review*).

THE ASIAN CIRCLE is conducted by a group with personal knowledge of the various parts of Asia, and through the collective experience of its members aims at giving to the public an informed, progressive, and disinterested view of Asian affairs, both in detail and as a whole. Its membership includes:

The Right Hon. LORD MESTON, K. C. S. I. (President).

Sir GEORGE BOUGHEY.

Sir PATRICK FAGAN, K. C. I. E., C. S. I.

Sir JOHN CUMMING, K. C. I. E., C. S. I.

Lieut.-General Sir GEORGE MACMUNN, K. C. B., K. C. S. I., D. S. O.

2.—NETHERLANDS. (INDIES SECTION)

ARTICLES by expert writers on Java and Sumatra.

3.—FRENCH COLONIES.

Special contributions concerning Syria and Indo-China.

4.—THE INNER EAST.

(Record of Events in Central Asia).

How to obtain THE ASIATIC REVIEW.

(41st year of Publication).

Please use this SUBSCRIPTION ORDER FORM

To EAST AND WEST, LTD.,

3, Victoria Street, London, S. W. 1.

DATE.....

Please send THE ASIATIC REVIEW for Twelve Months, beginning

with.....to.....

for which I enclose equivalent of £1 (One Pound Sterling).

(Please write full name and address distinctly).

By Appointment to
THE LORD IRWIN,
VICEROY & GOVERNOR-GENERAL
OF INDIA.



By Appointment to
H. M. THE KING.

By Appointment to
H. R. H. THE PRINCE OF WALES.

RANKEN & Co., Ltd.,

SIMLA, DELHI, LAHORE,
RAWALPINDI & MURREE.

ESTABLISHED IN CALCUTTA 1770.

CIVIL & MILITARY TAILORS,
GENTLEMAN'S OUTFITTERS,
AND BREECHES MAKERS.

ESTIMATES SUPPLIED FOR
FULL-DRESS AND MESS DRESS
UNIFORMS OF ALL REGIMENTS.

By Appointment to
H. E. Field Marshal Sir William R. BIRDWOOD, Bart.,
G.C.B., G.C.M.G., K.C.S.I., C.I.E., D.S.O.,
Commander-in-Chief in India.

COX & KINGS

(AGENTS) LIMITED,

BOMBAY,

CALCUTTA, KARACHI, RAWALPINDI.

TELEGRAMS : " COXSHIP. "

SPECIAL OFF SEASON FARES TO ENGLAND

**INSTEAD OF GOING TO THE HILLS
SPEND YOUR SHORT LEAVE AT HOME**

FULL DETAILS ON APPLICATION

IF YOUR LEAVE IS DUE

WRITE NOW TO

COX & KINGS

(AGENTS) LIMITED,

GENERAL PASSENGER, FREIGHT

AND

CLEARING AGENTS.

HEAD OFFICE—13 REGENT ST.,

LONDON, S. W. 1.

BRANCHES AT—

**LIVERPOOL, SOUTHAMPTON, MARSEILLES,
ALEXANDRIA—PORT SAID, CAIRO, JERUSALEM.**

**AGENTS AND CORRESPONDENTS THROUGHOUT
THE WORLD.**

MAPS PUBLISHED BY THE SURVEY OF INDIA

Are obtainable from the Map Record and Issue Office, 13, Wood Street, Calcutta, on the Public Service—on Cash Payment or Book Transfer, and, for private use, on Cash Payment or V. P. P.

Forest maps are obtainable only from the Officer-in-Charge, Forest Map Office, Dehra Dun.

Geological maps are obtainable from the Director, Geological Survey of India, Calcutta.

The Survey of India publish maps for the greater part of SOUTHERN ASIA between the meridians of 44° and 124° East of Greenwich and between parallels 4° and 44° north latitude.

2. Surveys executed after 1905 are classed as "MODERN," those PRIOR to that date are classed as "OLD."

3. Maps are printed in two styles or editions, viz., LAYERED and POLITICAL:—

- (a) The LAYERED edition represents a map printed in colours with graduated layer tints of colour to show altitudes, and, shading to emphasize the hills. This edition gives prominence to the physical features.
- (b) The POLITICAL edition represents a map printed in colours, but without graduated layer tints. Hills are represented by contours and shading. This edition gives prominence to the Civil Divisions of India which are shown by ribands of colour along boundaries of administrative partitions.

NOTE.—When maps are printed in colours, from mixed or old surveys the edition is styled "PRELIMINARY," and when published in black only or with hills in brown, the edition is styled "PROVISIONAL ISSUE."

4. The series of Modern maps are grouped under three Divisions:—

(I) GEOGRAPHICAL, embracing—

- (a) SOUTHERN ASIA SERIES, scale 1 : 2,000,000 or nearly 32 miles to 1 inch in LAYERED and POLITICAL editions, size 36 inches \times 24 inches, price Rs. 6 per copy for the Layered and Rs. 3 per copy for the Political edition.
- (b) INDIA AND ADJACENT COUNTRIES, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED and POLITICAL editions, or if from old surveys as PRELIMINARY EDITIONS; size 24 inches \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy.
- (c) INTERNATIONAL MAP OF INDIA, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED edition (without shading of hills), size 30 inches \times 26 inches, price Rs. 3-0-0 per copy.

(II) TOPOGRAPHICAL, comprising maps on:—

- (a) SCALE 1"=1 MILE in the POLITICAL edition, size 24 \times 19 inches, price Re. 1-8-0 per copy.
- (b) SCALE 1"=2 MILES in the POLITICAL edition, size 24 \times 19 inches, price Rs. 3 per copy.
- (c) SCALE 1"=4 MILES in the LAYERED and POLITICAL editions, size 24 \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy, and from old surveys as PROVISIONAL ISSUES, price Re. 1 per copy.

NOTE.—Index charts or Key maps to the Geographical and Topographical series are obtainable gratis.

(III) GENERAL MAPS which include:—

- (a) GENERAL MAPS OF INDIA, scale 32 miles to 1 inch, in sets of 12 sheets, each sheet 25 \times 33 inches, in LAYERED and POLITICAL editions, price Political edition, Rs. 12 or Layered edition, Rs. 24 per set, Various maps of India on the same and smaller scales and miscellaneous special maps illustrating Railways, etc.
- (b) PROVINCIAL MAPS, on scales 16 miles and 32 miles to 1 inch.
- (c) DISTRICT MAPS, on scales 4 miles and 8 miles to 1 inch.
- (d) CANTONMENT AND TOWN MAPS AND OTHER MISCELLANEOUS MAPS, of various scales and prices.

5. MAPS CATALOGUES can be obtained at ONE RUPEE per copy, postage As. 8 extra.

6. Maps can be mounted on cloth and folded or mounted on rollers for hanging, etc., at an extra charge.

7. The prices quoted for various maps are exclusive of postage and V. P. P. charges. Any further information may be obtained free of charge from the Officer-in-Charge, Map Record and Issue Office, 13, Wood Street, Calcutta.

BARR & STROUD, LIMITED,

*Specialists in the Design
and Manufacture of*

RANGEFINDERS,

HEIGHTFINDERS,

PERISCOPES,

GUNNERY AND
TORPEDO CONTROL
GEAR,

AERIAL SURVEYING
INSTRUMENTS,

BINOCULARS,

AND OTHER INSTRUMENTS
FOR NAVAL, MILITARY AND
AIR SERVICES.

KINEMATOGRAPH PROJECTORS.

HEAD OFFICE AND WORKS :
ANNIESLAND,
GLASGOW.

TELEGRAMS :—
TELEMETER, GLASGOW,
RETEMELET, SOWEST, LONDON



LONDON OFFICE :
15 VICTORIA ST.
LONDON S.W. 1.

CODES :—
5TH & 6TH EDITION A.B.C.

The JOURNAL of the UNITED SERVICE Institution of India

CONTENTS



Editorial.

1. A Discussion on the Official Handbook on Mechanization, by Lieut.-Colonel G. Le. Q. Martel, D.S.O., M.C.
2. The European Military Adventurers in India—Benolt De Bolgne, by C. Grey.
3. Education in the Indian Army, by "A Commanding Officer".
4. Blockade, by A. Mills.
5. A Military Miscellany, by "Hyderabad".
6. Some further Notes on the Tactical Handling in Normal Warfare of an Indian Battalion under the new Organization, by Captain S. W. Bower.
7. Some Notes on the Indian Ordnance Factories, by Lieut.-Colonel C. S. Tute.
8. Indian Regimental Histories, by "Hyderabad".
9. Notes on the Organization of Training of Infantry Reservists—Indian Army, by Major E. L. Ricketts O. B. E.
10. Some Notes on the new Manual of Military Law, by "Anonymous".

Military Notes.
Correspondence.
Reviews.

Printed by E. A. Smedley at
The Civil & Military Gazette Press, Lahore
And published by Major G. B. Henderson, for the United Service
Institution of India, Simla.
Price Rupees 2-8-0.
[All Rights Reserved.]

UNITED SERVICE INSTITUTION OF INDIA.

Rules of Membership.

ALL officers of the Royal Navy, Army, Royal Air Force, Colonial Forces, and of the Auxiliary Force, India, and Gazetted Government Officers shall be entitled to become members without ballot, on payment of the entrance fee and annual subscription.

The Council shall have the power of admitting as honorary members, the members of the Diplomatic Corps, foreign, naval and military officers, foreigners of distinction, other eminent individuals, and benefactors to the Institution, not otherwise eligible to become members.

Life Members of the Institution shall be admitted on the following terms:—

Rupees 120 + entrance fee (Rs. *10) = Rs. 130.

Ordinary Members of the Institution shall be admitted on payment of an entrance fee of Rs. *10 on joining, and an annual subscription of Rs. 10, to be paid in advance. The period of subscription commences on 1st January.

Members receive the Journal of the Institution, post free anywhere.

Members may obtain books from the library on loan free.

Honorary Members shall be entitled to attend the lectures and debates, and to use the premises and Library of the Institution without payment; but should they desire to be supplied with the Journal, an annual payment of Rs. 10, in advance, will be required.

Divisional, Brigade and Officers' Libraries, Regimental Messes, Clubs, and other subscribers for the Journal, shall pay Rs. 10 per annum.

Sergeants' Messes and Regimental Libraries, Reading and Recreation Rooms shall be permitted to obtain the Journal on payment of an annual subscription of Rs. 10.

If a member fails to pay his subscription for any financial year (ending 31st December) before the 1st June in the following year, a registered notice shall be sent to him by the Secretary inviting his attention to the fact. If the subscription is not paid by 1st January following his name shall be posted in the Reading Room for six months and then struck off the roll of members.

Members joining the Institution, on or after the 1st October, will not be charged subscription until the following 1st January, unless the Journals for the current year have been supplied.

Members are responsible that they keep the Secretary carefully posted in regard to changes of rank and address. Duplicate copies of the Journal will not be supplied free to members when the original has been posted to a member's last known address, and not returned by the post.

All communications shall be addressed to the Secretary, United Service Institution of India, Simla.

*Rs. 7 in the case of British Service Officers serving in India.

Contributions to the Journal.

All papers must be typewritten (in duplicate) and only on one side of the paper. All proper names, countries, towns, rivers, etc., must be in capital letters. All plans must have a scale on them.

Contributors are responsible, when they send articles containing any information which they have obtained by virtue of their official positions, that they have complied with the provisions of Regulations for the Army in India, para. 204, and King's Regulations, para. 522.

Anonymous contributions under a *non-de-guerre* will not be accepted or acknowledged; all contributions must be sent to the Secretary under the name of the writer and the paper will, if accepted, be published under that name unless a wish is expressed for it to be published under a *non-de-guerre*. The Executive Committee will decide whether the wish can be complied with.

The Committee reserve to themselves the right of omitting any matter which they consider objectionable. Articles are only accepted on these conditions.

The Committee do not undertake to authorise the publication of such papers as are accepted in the order in which they may have been received.

Contributors will be supplied with three copies of their paper *gratis*, if published.

Manuscripts of original papers sent for publication in the Journal will not be returned to the contributor, unless he expresses a wish to have them back and pays the postage.

To

THE SECRETARY,

UNITED SERVICE INSTITUTION OF INDIA, SIMLA.

Dear Sir,

I desire to become a Life
Ordinary Member of the United Service Institution of India, and since I understand that no election is necessary in my case, I have filled in the Bankers' order form below.

Yours faithfully,

Name _____

Corps _____

Permanent address _____

Present address _____

Bankers' Order Form.

(Bankers) Messrs. _____

On receipt of this order, please pay to LLOYD'S BANK, COX'S AND KING'S BRANCH, SIMLA, for the UNITED SERVICE INSTITUTION OF INDIA, the sum of Rs. _____, being (* Entrance Fee and) Subscription, and the sum of Rs. 10-0-0 every succeeding January until further notice.

Ordinary Members.

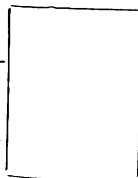
		Rs.	a.	p.
*Entrance Fee	--	10	0	0
Annual Subscription	..	10	0	0
Total	--	20	0	0

Life Members.

		Rs.	a.	p.
*Entrance Fee	..	10	0	0
Subscription	--	120	0	0
Total	..	130	0	0

Signature _____

Date _____



* Rs. 7 only in the case of British Service Officers serving in India.

MILITARY WIDOWS' FUND,

BRITISH SERVICE

THIS FUND enables a British Service (Army) officer, by subscribing from Rs. 6 to Rs. 10 per quarter, to assure, in the event of his death while on the Indian Establishment, immediate payment :—

To his widow	Rs. 8,775	to Rs. 12,375
For each child	„ 750	„ „ 1,125

Payments are made immediately on receipt of report of death, irrespective of death occurring in or out of India.

The sum paid to the widow varies with subscription and the sum for each child varies with age of child. Subscriptions are based on the rank of the officer.

Benefits are payable whether the deceased officer's family is residing in India or not.

It is to the advantage of an officer to join the Fund on his first tour of service in India, as otherwise, on joining it in a subsequent tour he would have to pay subscriptions for any previous tours in the country as a married officer, but not in excess of 4 years.

The Fund (late Queen's Military Widows' Fund) was established in 1820, to assist families of British Service (Army) officers dying in India, and mainly to enable them to return Home without delay.

The Fund is controlled by a Committee consisting of and elected by subscribing officers serving at Army Headquarters, Simla.

For admission and rules apply to :—

The Secretary,
MILITARY WIDOWS' FUND,
Army Headquarters, Simla.

24,000 MEALS EVERY DAY !

Once again Dr. Barnardo's Homes, who support the largest family in the world, are appealing for their Food Fund. The holiday season of the year is commencing, but there can be no holiday for the Food Bill Fund where this great Family is concerned. Last year 18,063 children and young people were dealt with by the Homes, and 1,673 were permanently admitted, which means that till they are able to earn their own living (an average of about 10 years) they must be cared for, fed, clothed, taught, and trained.

To meet the Food Bill during the lean months of the year 400,000 Half-Crowns are asked for as Birthday Gifts in memory of the Founder, Dr. Barnardo, and to celebrate the 63rd Anniversary and Founder's Day.

Every day 24,000 meals have to be provided for this great family, which equals a town in size.

1,600 loaves are baked daily by lads at the Boys' Garden City bakehouse ; but this large number supplies only about half the family.

There are always about 8,000 children in these national Homes, and 5 others, on an average, are admitted daily. These destitute little people cannot appeal for themselves, and we are asked to do so on their behalf. The work is well worth doing from the national standpoint, for the Homes turn these C 3 children into A 1 citizens, and then place them out in the world.

Cheques and Orders may be made payable to "Dr. Barnardo's Homes Food Fund" and crossed, and addressed to "Dr. Barnardo's Homes Food Fund", 18-26, Stepney Causeway, London, E. 1.

HEAD OFFICES OF DR. BARNARDO'S HOMES,

18-26, Stepney Causeway,

London E. 1.

United Service Institution of India.

PATRON :

His Excellency the Viceroy and Governor-General of India.

VICE-PATRONS :

His Excellency the Governor of Madras.
His Excellency the Governor of Bombay.
His Excellency the Governor of Bengal.
His Excellency the Commander-in-Chief in India.
His Excellency the Governor of the United Provinces.
His Excellency the Governor of the Punjab.
His Excellency the Governor of Bihar and Orissa.
His Excellency the Governor of Burma.
His Excellency the Governor of the Central Provinces.
His Excellency the Governor of Assam.
His Excellency the Naval Commander-in-Chief, East Indies.
The General Officer Commanding-in-Chief, Northern Command.
The General Officer Commanding-in-Chief, Southern Command.
The General Officer Commanding-in-Chief, Eastern Command.
The General Officer Commanding-in-Chief, Western Command.

MEMBERS OF THE COUNCIL, 1929-30.

Ex-officio Members.

- | | |
|--|--|
| 1. The Chief of the General Staff. | 8. The Master-General of the Ordnance in India. |
| 2. The Adjutant-General in India. | 9. The Engineer-in-Chief. |
| 3. The Air Vice-Marshal, Commanding R. A. F. in India. | 10. The Military Secretary, A. H. Q. |
| 4. The Secretary, Army Department. | 11. The Director, Medical Services. |
| 5. Sir Denys Bray, K.C.I.E., C.S.I., C.B.E. | 12. The Director, Royal Indian Marine. |
| 6. The Hon'ble Mr. H. G. Haig, C.I.E. | 13. The Director, Military Operations, General Staff, A. H. Q. |
| 7. The Quartermaster-General in India. | |

Elected Members.

- | | |
|---|--|
| 14. Brigadier H. C. Jackson, C.B., C.M.G., D.S.O. | 17. Air Commodore R. P. Mills, M.C., A.F.C. |
| 15. Brigadier H. F. E. MacMahon, C.B.E., M.C. | 18. Major A. F. R. Lumby, C.I.E., O.B.E. |
| 16. Colonel W. R. Blackwell, C.M.G. | 19. Major T. C. E. Barstow, O.B.E. |
| | 20. Sir David Petrie, K.T., C.I.E., C.V.O., C.B.E., M.A. |

MEMBERS OF THE EXECUTIVE COMMITTEE, 1929-30.

Elected Members.

- | | |
|---|--|
| 1. Major-General S.F. Muspratt, C.S.I., C.I.E., D.S.O. (President). | 4. Colonel W. R. Blackwell, C.M.G. |
| 2. Brigadier H. C. Jackson, C.B., C.M.G., D.S.O. | 5. Air Commodore R. P. Mills, M.C., A.F.C. |
| 3. Brigadier H. F. E. MacMahon, C.B.E., M.C. | 6. Major A. F. R. Lumby, C.I.E., O.B.E. |
| | 7. „ T. C. E. Barstow, O.B.E. |

Additional Members.

- | | |
|--|-------------------------------|
| 8. Brigadier D. G. Ridgeway, D.S.O. | 11. Major C. A. Boyle, D.S.O. |
| 9. Wing Commander R. H. Verney, O.B.E. | 12. Captain H. Bullock. |
| 10. Lt.-Colonel J. Morrison. | |

SECRETARY & EDITOR
SUPERINTENDENT ..
LIBRARIAN ..
BANKERS ..

..MAJOR G. B. HENDERSON.
..CONDR. J. C. ALFORD.
..MISS W. McCORMICK.
..LLOYD'S BANK, LIMITED,
(COX'S AND KING'S BRANCH), SIMLA.

1. The United Service Institution of India is situated at Simla.
2. Officers wishing to become members of the United Service Institution of India should apply to the Secretary. The rules of membership are printed inside front cover.

3. The Reading Room of the Institution is provided with all the leading illustrated papers, newspapers, magazines, and journals of military interest that are published.

4. There is a well-stocked library in the Institution, from which members can obtain books on loan free.

5. The Institution publishes a Quarterly Journal in the months of January, April, July and October which is issued postage free to members in any part of the world.

6. Members and the public are invited to contribute articles to the Journal of the Institution for which honoraria will be awarded by the Executive Committee. Rules for the guidance of contributors will be found in para. IV, Secretary's Notes.

7. Members are responsible that they keep the Secretary carefully posted with regard to changes of address.

8. When temporarily in the U. K., Officers of the Indian Army can join the Royal United Service Institution, Whitehall, for a period of six months on payment of half a guinea, or for a period of one year on payment of a guinea.

SALE OF PERIODICALS.

This Institution offers the following periodicals to members on sale for twelve months—1st January to 31st December 1930. The papers will be sold to the members submitting the highest bids by the 31st January 1930. Each issue of the periodicals will be sent to the purchaser as soon as the next issue arrives in Simla. In the case of purchasers in Simla, delivery will be free, otherwise postage will be charged.

Title.	Published.	Cost per copy new.	
		s.	d.
1. The Review of Reviews	Monthly	.. 1	0
2. The Empire Review	"	.. 2	0
3. The Nineteenth Century and After	"	.. 3	0
4. The Geographical Journal	"	.. 2	0
5. The United Empire	"	.. 1	0
6. Blackwood's Magazine	"	.. 2	6
7. The Journal of the R. A. M. C.	"	.. 2	0
8. The Navy	"	.. 0	6
9. The British Trade Journal and Export World	"	.. 1	0
10. The Cavalry Journal	Quarterly	.. 5	0
11. The Asiatic Review	"	.. 5	0
12. The Royal Engineer's Journal	"	.. 5	0
13. The British Empire Review	"	.. 0	6
14. The Fighting Forces	"	.. 5	0
15. The Journal of the Royal Artillery	"	.. 5	0
16. Journal of the Society for Army Historical Research	"	.. 6	0

American Publications.

			Cents.
1. The Canadian Defence Quarterly	Monthly	..	50
2. The National Geographic Magazine	"	..	50
3. The Coast Artillery Journal	"	..	50
4. The Infantry Journal	"	..	50
5. The Journal of the Franklin Institute	"	..	60
6. The Cavalry Journal	Quarterly	..	75
7. Foreign Affairs	"	..	1.25
8. The Army and Navy Journal	Weekly	..	20

Foreign Publications.

1. Revue Militaire Suisse	Monthly.	..
2. Bulletin Belge des Sciences Militaires	"	..
3. Rivista Di Artiglieria E Genio	"	..
4. Rivista Militaire Italiana	"	..
5. L'Afrique Francaise	"	..

Illustrated Publications.

1. The Times Weekly Illustrated	Weekly	..	4d.
2. The Aeroplane	"	..	6d.
3. The Tatler	"	..	1 Re.
4. The Sketch	"	..	1 "
5. The Bystander	"	..	1 "
6. The Illustrated Sporting and Dramatic News	"	..	1 "
7. Britannia and Eve	Monthly	..	1 "
8. India Monthly Magazine	"	..	1 "

**" IT SHOWS WHAT CAN BE
DONE, GIVEN GOOD
INSTRUCTION "**

*Extract from letter of candidate
who gained 700 marks out of 800
in " Business Organisation "*
after a course with

**EXPERT COACHING
IN
BUSINESS ORGANIZATION
AND POLITICAL ECONOMY
FOR
STAFF COLLEGE
ENTRANCE EXAM.
IS PROVIDED BY**

PITMAN'S CORRESPONDENCE COLLEGE,
238, SOUTHAMPTON ROW, PROSPECTUS ON APPLICATION.
LONDON, W.C. 1, ENGLAND.

United Service Institution of India.

OCTOBER 1929.

CONTENTS.

	PAGE.
Editorial	425
1. A Discussion on the Official Handbook on Mechaniza- tion	430
2. The European Military Adventurers in India—Benoit De Boigne	441
3. Education in the Indian Army	447
4. Blockade	451
5. A Military Miscellany	461
6. Some further Notes on the Tactical Handling in Normal Warfare of an Indian Battalion under the new Organization	465
7. Some Notes on the Indian Ordnance Factories	469
8. Indian Regimental Histories	483
9. Notes on the Organization of Training of Infantry Reservists—Indian Army	488
10. Some Notes on the new Manual of Military Law	494
Military Notes	510
Correspondence	547

REVIEWS.

1. The Decisive Wars of History	549
2. Further Aspects of Mechanization	550
3. Army Health in India	553
4. Armaments Year-Book, fifth year, 1929	554
5. Official History of Australia in the War of 1914-18, Vol. III, The A. I. F. in France 1916	555
6. An English-Punjabi Dictionary	558
7. Napier's Rifles	559
8. Practical Horsemanship	560

I.—New Members.

The following new members joined the Institution from 1st June to 31st August, 1929:—

Life Member.

MAJOR M. D. VIGORS.

Ordinary Members.

Captain H. S. Jeffs.	Captain G. Greffield.
Lieut. F. W. Sandars.	Captain C. F. Forestier-Walker.
Captain C. B. Birdwood.	Major A. A. B. Dowler.
Lt.-Colonel D. G. Sandeman.	Captain M. T. Chapman.
Captain W. J. Shaw.	Captain G. T. M. Allen.
Captain H. W. Dinwiddie.	Captain A. J. Edney.
Captain L. James.	Captain M. Glover.
Captain J. R. T. Aldous.	Captain E. W. Lickman.
Captain R. H. R. Cumming.	Captain J. Wickham.
Lieut. A. F. Tod.	Lt.-Colonel H. H. A. Emerson.
Captain G. N. Wilkinson.	F. A. T. Heron, Esq.
Captain E. G. Perry.	Major B. S. Pathania.
Captain J. B. Macdonald.	Captain G. F. Yarde.
Captain C. P. J. Prioleau.	Captain R. B. Emerson.
Lieut. E. R. Sword.	Colonel R. C. R. Hill.
Captain H. N. Irwin.	Captain H. L. H. Boustead.
Captain R. A. Hutton.	Captain A. L. Pemberton.
Captain E. Hakewill-Smith.	Captain C. P. Whitaker.
2-Lieut. E. G. Hazelton.	Rear-Admiral H. T. Walwyn.
Captain A. G. C. Bidie.	Lt.-Colonel G. Le Q. Martel.
	Lieut. C. R. Buchanan.

II.—Examinations.

1. The following table shows the campaigns on which the military history papers will be set from October, 1929, for lieutenants for promotion to captain in sub-head (b) (iii) and for captains for promotion to major in sub-head (d) (iii):—

1 Serial No.	2 Date of examination.	3 Campaign set for the first time.	4 Campaign set for the second time.	5 Campaign set for the last time.
1	October, 1929 ..	Egypt and Palestine, from the outbreak of war with Germany to June, 1917.	..	Palestine, 1917-18.
2	March, 1930 ..	Battles of Aubers Ridge, Festubert and Loos, 1915.	Egypt and Palestine, from the outbreak of war with Germany to June, 1917.	..
3	October, 1930 ..	..	Battles of Aubers Ridge, Festubert and Loos, 1915.	Egypt and Palestine, from the outbreak of war with Germany to June, 1917.
4	March, 1931 ..	Marlborough's Campaigns, 1702-09.	..	Battles of Aubers Ridge, Festubert and Loos, 1915.

2. Before beginning to read Marlborough's Campaigns, candidates are advised to study carefully Section 9, Training and Manœuvre Regulations, 1923.

3. Army Orders 11 and 292 of 1927 and 49 of 1928 were republished as India Army Orders 241 and 768 of 1927 and 359 of 1928, respectively.

4. Books on military history and languages with dictionaries are available in the Library. The following list of books may be found useful for reference by officers studying for Promotion Examinations or entrance to the Staff College :—

(The list of books presented and purchased as shown in the Journal should also be consulted.)

MILITARY HISTORY.

1.—*The Campaign of the British Army in France and Belgium.*

A.—OFFICIAL HISTORY OF THE WAR.

Military Operations, France and Belgium, Vol. I (to October, 1914).

Military Operations, France and Belgium, Vol. II (to 20th November, 1914).

Military Operations France and Belgium, Vol. IV, 1915.

Sir John French's Despatches.

B.—OTHER BOOKS.

40 days in 1914 (General Maurice, new edition).

1914 (Viscount French).

My War Memories (Ludendorff).

General Headquarters, 1914-16, and its Critical Decisions (Falkenhayn).

The March on Paris, 1914 (Von Kluck).

Ypres, 1914. (An official account) (German General Staff).

Oxford Pamphlets, August 1914. The Coming of the War. (Spencer Wilkinson).

Oxford Pamphlets, August 1914, Nos. VII and X.

Times Documentary History of the War, Vol. V, Military, Part I.

Times Documentary History of the War, Vol. VIII, Part III.

Der Grobe Krieg : Die Schlacht bei Mons (German General Staff).

Der Grobe Krieg : Die Schlacht bei Longwy (German General Staff).

Story of the Fourth Army (Montgomery).

2.—*The Palestine Campaign.***A.—OFFICIAL ACCOUNTS.**

A Brief Record of the Advance of the Egyptian Expeditionary Force, 1919.

The Australian Imperial Force in Sinai and Palestine (H. S. Gullett).

The New Zealanders in Sinai and Palestine (Lieut.-Col. O. G. Powels).

The Official History of the Great War. Military Operations in Egypt and Palestine, Vol. I, and Maps (Lieut.-General Sir George MacMunn and Captain Cyril Falls).

The Official History of Australia in the War, 1914-18, Vol. VII, Sinai and Palestine (H. S. Gullett).

B.—OTHER BOOKS.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The Revolt in the Desert (T. E. Lawrence).

Allenby's Final Triumph (W. T. Massey).

How Jerusalem was Won (W. T. Massey).

Outline of the Egyptian and Palestine Campaigns, 1914-18 (Bowman-Manifold).

The Palestine Campaign (Colonel A. P. Wavell.)

The Desert Campaign (W. T. Massey.)

L'Attaque du Canal de Suez (Douin).

Army Quarterly—October 1920 (T. E. Lawrence's article).

Army Quarterly—January 1922 (Lieut.-Colonel Wavell and C. T. Atkinson's articles).

Cavalry Journal—October 1921 (Lieut.-Colonel Rex Osborne's article).

Cavalry Journal—July 1923 (Lieut.-Colonel Beston's article).

R. U. S. I. Journal—May 1922 (Colonel-Commandant Weir's article).

U. S. I. Journal—October 1923 (Captain Channer's article).

3.—*The Dardanelles Campaign.*

Description.

- Naval and Military Despatches .. A clear account of the operations in detail from the G. H. Q. standpoint.
- Reports of the Dardanelles Commission. Fixes responsibility for the inception and conduct of the campaign. An interesting study in the relationship between Politicians and Naval and Military Experts.
- The Dardanelles (Callwell) .. The best account and criticism of the strategic conduct of the campaign.
- Gallipoli Diary (Sir I. Hamilton) .. The campaign from the point of view of the C.-in-C. on the spot.
- Life of Lord Kitchener (Arthur) .. Throws considerable light on Lord Kitchener's direction of the campaign.
- The Dardanelles Campaign (Nevinson).
Gallipoli (Masefield) } Well written and picturesque accounts by eye-witnesses.
- The World Crisis (Winston Churchill.) Explains his part in inception the campaign.
- Soldiers and Statesmen (Field-Marshal Sir W. Robertson). From point of view of the C. I. G. S.
- Five years in Turkey (Liman Van Sanders).
- Official Account: Official History of the War, Naval Operations Vols. II and III.
- Gallipoli Campaign (Outline of Military Operations). By a Student.
- Experiences of a Dugout (Callwell).
- Despatches from the Dardanelles (Ian Hamilton).
- The Navy in the Dardanelles Campaign (Wemyss).
- Official History of the Great War, Gallipoli, May 1915. Vol. I (C. F. Aspinall Oglander).

NOTE.—For a fuller list of authorities, see Appendix I to Callwell's "The Dardanelles."

4.—The Mesopotamia Campaign.

The Campaign in Mesopotamia, 1914-18 (Evans).

Official History of the Campaign in Mesopotamia, Vol. IV
(F. J. Moberly).

Critical Study of the Campaign in Mesopotamia up to April,
1917.

Soldiers and Statesmen (Field-Marshal Sir W. Robertson).

The World Crisis (Winston Churchill).

Notes and Lectures on the Campaign in Mesopotamia
(A. Kearsey).

5.—Waterloo Campaign.

Waterloo Campaign (J. H. Anderson).

Waterloo (Hilaire Belloc).

Wellington and Waterloo (Arthur Griffiths).

Waterloo, the Downfall of the first Napoleon (George
Hooper).

Campaign of 1815 (W. H. James).

With Napoleon at Waterloo (E. B. Low).

Campaign of 1815, Ligny : Quatre-Bras : Waterloo (W.
O'Connor Morris).

Waterloo Campaign (S. C. Pratt).

Wellington and Waterloo (G. W. Redway).

Wellington Campaigns. Peninsula-Waterloo, 1808-15, also
Moore's.

Campaign of Corunna (C. W. Robinson).

6.—Marlborough's Campaigns.

History of the British Army, Vol. I (Hon. J. W. Fortescue).

Life of John, Duke of Marlborough, Vols. I and II (Archibald
Alison).

The Wars of Marlborough, 1702-09 (Frank Taylor).

John Churchill, Duke of Marlborough, Vols. I and II (Viscount
Wolseley).

Marlborough and the Rise of the British Army (C. T. Atkinson).

A Short Life of Marlborough (H. J. & E. A. Edwards).

The Battle of Blenheim (Hilaire Belloc).

7.—*The American Civil War.*

Stonewall Jackson and the American Civil War (G. F. R. Henderson).

History of the Civil War in the United States, 1861-65 (W. B. Wood and J. E. Edmonds).

History of the Campaign of Gen. T. J. (Stonewall) Jackson in the Shenandoah Valley of Virginia (William Allen).

American Civil War (J. H. Anderson).

The 1st American Civil War, 1775-78 (Henry Belcher).

The American Civil War, 1861-64 (John Formby).

History of the American Civil War (J. W. Draper).

Fredericksburg and Chancellorsville (J. E. Gough).

Battles and Leaders of the Civil War (Johnson and Buel).

War of Secession, 1861-62 (G. W. Redway).

8.—*The East Prussian Campaign.*

Tannenberg—First 30 days in East Prussia (Edmond Ironside).

9.—*The Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

A Staff Officer's Scrapbook (Ian Hamilton).

German Official Account.

Lectures on the Strategy of the Russo-Japanese War (Bird).

Question on the Russo-Japanese War (Brunker).

Official Account: The Russo-Japanese War (Naval and Military),
3 Vols., published by Committee of Imperial Defence.

Outline of the Russo-Japanese War (Ross).

A Study of the Russo-Japanese War (Chasseur).

My Experiences at Nan Shan and Port Arthur (Tretyakow).

Outline History of the Russo-Japanese War, 1904, up to the
Battle of Liao-Yang, with Questions and Answers (P. W.).

A Short Account of the Russo-Japanese War ("Footslogger").

An Account of the Battle of Liao-Yang (with questions and 10
maps for examination purposes) (Bird).

10.—*Organization of the Army since 1868.*

A.—ORGANIZATION OF THE ARMY SINCE 1868.

History of British Army, by Fortescue, Vols. I to XI.

Outline of the Development of British Army, by Major-General Sir W. H. Anderson.

Our Fighting Services, by Sir Evelyn Wood.

B.—FORCES OF THE EMPIRE.

The Annual Army Estimates of Effective and Non-Effective Services (H. M. Stationery Office).

* Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories, 1928.

The Statesman's Year Book 1929.

Army List.

Articles in Newspapers and Magazines, *viz.*, R. U. S. I. Journal, Army Quarterly, Journal of the U. S. I. of India, etc.

† Handbooks for the Indian Army—Sikhs, 1928.

11.—*Development and Constitution of the British Empire.*

A.—THE BRITISH EMPIRE.

Encyclopædia Britannica—(contains much concentrated information).

The Statesman's Year Book 1929.

Whitaker's Almanack.

The Colonial Office List.

The Government of the British Empire (Jenks, 1923).

The Foundation and Growth of the British Empire (J. A. Williamson, 1918).

The Beginnings of English Overseas Enterprise (Sir C. P. Lucas 1917).

The British Empire Series. (XII Volumes).

The Government of England (L. A. Lowell, 1912).

The Expansion of the British Empire (W. H. Woodward, 1921 and 1924 edition).

Overseas Britain (E. F. Knight, 1907).

The Origin and Growth of the English Colonies and of Their System of Government (H. E. Egerton, 1903).

* Particularly recommended by the C. I. G. S. for all officers to read.

† Not to be removed from the library.

A Short History of Politics (Jenks, 1900).
The English Constitution (Bagehot, 1909).
The Expansion of England (Sir J. Seely, 1883).
Introduction of the Study of the Law of the Constitution (A. V. Dicey, 1908).
England in the Seven Years' War (Sir J. Corbett, 1907).
Selected Speeches and Documents on British Colonial Policy, 2 Vols. (A. B. Keith, 1918).
Forty-one Years in India (Lord Roberts).
History of the British Army (Sir John Fortescue).
General Survey of the History of India (Sir Verney Lovett).
Citizenship in India (Captain P. S. Cannon).
India in 1926-27 (J. Coatman).
India in 1927-28 (J. Coatman).
India (Nations of to-day Series). (Sir Verney Lovett).

B.—BOOKS ON SPECIAL PORTIONS OF THE EMPIRE OR WORLD.

The Rise and Expansion of British Dominions in India (Sir A. C. Lyall, 1894).
A Brief History of the Indian Peoples (Sir W. H. Hunter, 1907).
The Nearer East (Hogarth, 1902).
Modern Egypt (Cromer, 1908).
Egypt and the Army (Elgood, 1924).
The History of Canada (W. L. Grant).
Nova Scotia (B. Wilson, 1911).
Report on British North America (Sir O. P. Lucas).
The Union of South Africa (R. H. Brand, 1909).
Short History of Australia (E. Scot).
History of the Australasian Colonies (Jenks, 1912).
The English in the West Indies (J. A. Froude, 1888).
The Lost Possessions of England (W. F. Lord, 1896).
International Relations of the Chinese Empire (H. B. Mosse).
(Kelly and Walsh, Shanghai).
What's Wrong with China ? (Gilbert).
Why China Sees Red (Putman-Weale).
Napoleon's Campaigns in Italy (Lieut.-Col. R. G. Burton).

12.—*Military Geography.*

Naval and Military Geography of the British Empire (Dr. Vaughan Cornish, 1916).

Imperial Military Geography (Capt. D. H. Cole, 1928).

Introduction of Military Geography (Col. E. S. May).

Imperial Defence (Col. E. S. May).

Main Feature of the Japanese and other Pacific Problems.

(Reprinted from *Morning Post*. Sifton Præd).

Britain and the British Seas (H. J. Makinder, 1907).

Military Geography (Macguire).

Imperial Strategy (Repington).

War and the Empire (H. Foster).

Historical Geography of British Colonies (Dominions), 7 Vols.

(Sir C. P. Lucas, 1906-17)—

Vol. 1, Mediterranean.

Vol. 2, West Indies.

Vol. 3, West Africa.

Vol. 4, South Africa.

Vol. 5, Canada.

Vol. 6, Australia.

Vol. 7, India.

The Influence of Sea Power on History (A. T. Mahan, 1890).

Historical Geography of the British Empire (Hereford George).

The Mastery of the Pacific (A. R. Colquhoun, 1902).

Frontiers (C. B. Fawcett, 1918).

13.—*Foreign Armies.*

OFFICIAL.

* Handbook of the United States Army, 1924.

* Handbook of the Army of the Netherlands, 1922.

* Handbook of the French Army, 1925.

* Handbook of the Belgian Army, 1926.

* Handbook of the Polish Army, 1927.

* Handbook of the Army of the Kingdom of Serbs, Croats and Slovenes (Yugo-Slavia) 1927.

* Handbook of the Czechoslovak Army, 1927.

* Handbook of the Swiss Army, 1924.

* Handbook of the German Army, 1928.

*NOT to be removed from the Library.

14.—*Tactical.*

Common mistakes in the solution of tactical problems and how to avoid them (Lieut.-Colonel A. B. Beauman, 1926).

Historical illustrations to Field Service Regulations, Vol. II (Major E. G. Eady, 1926).

Elementary Tactics or the Art of War, British School (Major R. P. Pakenham-Walsh, 1926).

III.—Payment for Articles in the Journals.

Articles accepted for publication in the Journal are paid for, and a sum of approximately Rs. 750 is awarded for articles and reviews published in each Quarterly Journal.

IV.—Contributions to the Journal.

Articles submitted for publication must be typed in *duplicate*. With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Committee.

Instructions for the preparation of drawings and plans for reproduction by lithography.

These should be in *jet black*. No washes or ribands of colour should on any account be used.

If it is absolutely necessary to use colour (and these are only permissible in line work or names) the following will reproduce photographically, *i. e.* :—

Dark red, dark orange, dark green. No other colour should on any account be used.

V.—Library Rules.

1. The Library is only open to members and honorary members of the United Service Institution of India. Members are requested to look upon books as not transferable to their friends.

2. No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

3. The United Service Institution of India is open all the year round—including Sundays—from 9 A.M. until sunset. Books may be taken out at any time provided Rule 2 is complied with.

4. A member shall not be allowed, at one time, more than three books or sets of books.

5. Papers, magazines, "works of reference" or books marked "Not to be Taken Away," or noted as "Confidential" may not be removed.

6. No particular limit is set as to the number of days for which a member in Simla may keep a book, the Council being desirous of making the library as useful as possible to members; but if after the expiration of a fortnight from date of issue it is required by any other member it will be re-called.

7. Applications for books from members at out-stations are dealt with as early as possible, and books are despatched per Registered P. P. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

8. If a book is not returned at the end of one month, it must be paid for without the option of return, if so required by the Executive Committee.

9. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

10. The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

11. A list of all books presented and purchased, and also a list of books useful to members studying for the Staff College and Promotion Examinations, will be found under Secretary's Notes in the quarterly issue of the U. S. I. Journal.

12. Members are invited to contribute presents of books, maps and photographs of naval and military interest. These may be addressed to the Secretary, U. S. I. of India, Simla. They will be duly acknowledged.

VI.—Library Catalogue.

The catalogue is completed to 31st March 1924. Price Rs. 3-8-0 or postage paid Rs. 3-14-0. An addendum completed up to 30th September 1927 is available. Price As. 8 plus postage As. 4.

VII.—Army List Pages.

The U. S. I. is prepared to supply members and units with manuscript or type-written copies of Indian Army List pages, at the rate of Rs. 2 per manuscript or type-written page.

BOOKS PRESENTED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. League of Nations Armaments Year-Book.	1928-29.	..
2. Practical Horsemanship. (Messrs. H. F. and G. Witherby, London).	1929.	Captain J. L. M. Barrett.
3. An English Punjabi Dictionary (The Civil & Military Gazette, Lahore).	1929.	Rev. Canon W. P. Hares.
4. Exploration at the Shaksgam Valley and Aghil Ranges, 1926. Vol. XXII. (Presented by the Survey of India, Dehra Dun).	1928.	Major Kenneth Mason.
5. History of the 1st Bn. 19th Hyderabad Regiment. (Presented by the Regiment).	1928.	Major R. G. Burton.
6. History of the 5/6th Rajputana Rifles, Napier's Rifles. (The Oxford University Press, Bombay).	..	H. G. Rawlinson.
7. Army Health in India (Messrs. John Bale, Sons and Danielsson, Ltd., London).	.. 1929.	Lt-Col. John Mackenzie.
8. The Decisive Wars of History—Study in Strategy. (Messrs. G. Bell & Sons, Ltd., London).	1929.	B. H. Liddell Hart.
9. Further Aspects of Mechanization. (Messrs. William Clowes and Sons, Ltd., London).	1929.	Maj.-Genl. H. Rowan-Robinson.
10. The Operations in Egypt and Palestine 1914 to June 1917. Illustrating the F. S. Regulations. (Messrs. Gale and Polden, Ltd., Aldershot.)	1929.	Col. A. Kearsey.
11. 1915 Campaign in France, Battles of Aubers Ridge, Festubert & Loos. (Messrs. Gale and Polden, Ltd., Aldershot.)	1929.	Col. A. Kearsey.
12. Military Law, 17th Edn. (Messrs. Gale and Polden, Ltd., Aldershot.)	.. 1929.	Lt.-Col. S. T. Banning.

BOOKS PURCHASED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>
1. Historical and Military Essays ..	1928.	Sir John Fortescue.
2. Warriors Still at Ease ..	1928.	A. Armstrong.
3. Gentleman Johnny Burgoyne ..	1928.	F. J. Huddleston.
4. Vicount Haldane of Cloan—The Man and His Work	1928.	Vicount Grey of Fallodon and others.
5. A History of European Diplomacy 1451-1789.	1928.	Mowat.
6. The Empire in the New Era ..	1928.	L. S. Amery.
7. Who's Who ..	1929.	..
8. Official History of the Great War 1915. Vol. I. Gallipoli.	1929.	Major-Genl. C. F. Aspinall-Oglander.
9. The Third Route ..	1929.	Phillip Sassoon.
10. Official History of the Great War—The Merchant Navy Vol. III.	1929.	Archibald Hurd.
11. Field Marshal Earl Haig ..	1929.	Brig.-Genl. John Charteris.
12. A. & Q. Military Administration in War, 2nd. ed.	1929.	Lt.-Col. W. G. Lindsell.
13. Memorandum on Resignation August 1914.	..	John, Viscount Morley.
14. The World Crisis—The Aftermath	1929.	Winston S. Churchill.
15. Richard Burdon Haldane—An Autobiography.	1929.	..
16. Benito Mussolini—My Autobiography ..	..	..
17. The Campaign in Gallipoli .. ..	..	Kannangissen, Pasha.
18. Foch Talks ..	1929.	Bugnet.

BOOKS ON ORDER.

1. War as an Instrument of National Policy.		J. T. Shotwell.
2. Versailles to Rapallo ..	..	Baron E. V. D'Abernon.
3. The New British Empire ..	..	L. Haden Guest.
4. British Documents on the Origins of War 1894-1914. Vols. IV & V.		Gooch & Temperley.

IX.—Schemes.

The schemes in the Institution have been considerably increased and in order to simplify their issue they have been classified and numbered as follows

They can all be obtained by V. P. P., plus postage, on application to the Secretary.

(A) Administrative Exercise, with diagram. (Reprinted May, 1928).

To illustrate the supply system of a Division (suitable for Staff College or Promotion) .. Rs. 2

(B) Mountain Warfare (Reprinted May, 1928).

(i) A scheme complete with map and solution .. , 2-8

(ii) Three Lectures on Mountain Warfare .. , 1-8

(C) Staff College Series (Reprinted May, 1928). Complete with maps and solutions :—

(i) Approach March.

Reconnaissance of night attack.

Orders for night attack Rs. 2-8

(ii) Outposts.

Defence.

Action of a Force Retiring , 2-8

(iii) Move by M. T.

Occupation of a defensive position.

Counter-attack , 2-8

(D) Promotion Series (Reprinted May, 1928). Complete with maps and solutions.

Lieutenant to Captain—

(i) Mountain Warfare Rs. 2-8

(ii) Defence.

Attack orders , 2-8

Captain to Major—

(i) Outposts.

Defensive position.

Withdrawal , 2-8

(ii) Tactical Exercise without troops.

Reconnaissance.

Attack orders , 2-8

(E) Course of five lectures given at the London School of Economics, 1925, on "Transportation in War." As. 12.

(F) Staff College Course Schemes (1928) :—

- (i) A set of three schemes, as given at the Army Headquarters Staff College Course, 1928, complete with maps and solutions, complete set .. Rs. 5

(G) The following tactical schemes, and a limited number of other papers, as given at the Army Headquarters Staff College Course, 1929, are available :—**TACTICAL SCHEMES.**

- (i) 3 Schemes complete with maps and solutions .. Rs. 3 each

OTHER PAPERS.**Precis of Lecture on —**

- | | | |
|--|-------------|-----|
| (ii) Night Operations | 1 | „ |
| (iii) The Palestine Campaign from 9th November 1927 | Rs. 1 As. 8 | „ |
| (iv) The Dardanelles Campaign | 1 | „ 8 |
| (v) Action of the B. E. F. in 1914 (up to and including the Aisne) | 1 | „ |
| (vi) American Civil War (1st Lecture) | As. 12 | „ |
| American Civil War (2nd Lecture) | 12 | „ |
| (vii) Napoleon's Campaign in Italy 1796 | 12 | „ |
| (viii) Waterloo Campaign | 12 | „ |
| (ix) The Peninsular War up to and including Salamanca | As. 12 each | |
| (x) East Prussian Campaign in 1914 | 12 | „ |
| (xi) The Russo-Japanese War up to the Battle of Liao-Yang | 8 | „ |
| (xii) Ordnance Services | 8 | „ |
| (xiii) The Organization of the British Army | 8 | „ |
| (xiv) Artillery Organization | 8 | „ |
| (xv) Transportation (War) | 8 | „ |
| (xvi) Training | 8 | „ |

(xvii)	The " Q " Administrative Services in Peace	As. 8	„
(xviii)	Anti-aircraft Defence in the Field	.. „ 8	„
(xix)	The rôle of an Air Force Co-operation with a Military Force	.. .. 8	„
(xx)	The Tactical Employment of Divisional Artillery in Mobile Warfare	.. .. 8	„
(xxi)	Intercommunication within a Division	.. „ 8	„
(xxii)	Armoured Cars	.. .. 8	„
(xxiii)	Tanks	.. .. 8	„
(xxiv)	The Employment of Cavalry with a Brigade of all Arms	.. .. 8	„
(xxv)	The Dominion Forces	.. .. 8	„
(xxvi)	Indian Territorial Force	.. .. 8	„
(xxvii)	Military Law (II)	.. .. 8	„
(xxviii)	Military Law (III)	.. .. 8	„
(xxix)	Military Law Paper (questions and answers)	„ 8	„
(xxx)	Hints on Working for the Examination and on tackling the Tactical Papers	.. „ 8	„
(xxxi)	Organization and Administration (Peace)	.. „ 8	„
(xxxii)	Organization and Administration (War)	.. „ 8	„

Copies of Military Law paper (questions and answers), as given at the Army Headquarters Staff College Course, 1926, are also available at As. 4 per copy.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College and Promotion Examinations by introducing as many new schemes as possible.

It is obviously impossible for the Secretary to undertake the correction of individual solutions, but all the recent schemes include a suggested solution in the form in which it is considered that the paper should have been answered, with reasons for the solution given.

Officers are recommended to work all their schemes against time and to get into the habit of the methodical allotment of time to the various questions asked.

Prize Essay Gold Medallists.

(With Rank of Officers at the date of the Essay).

- 1872..ROBERTS, Lieut.-Col. F. S., V.C., C.B., R.A.
 1873..COLQUHOUN, Capt. J. S., R.A.
 1874..COLQUHOUN, Capt. J. S., R.A.
 1879..ST. JOHN, Maj., O.B.C., R.E.
 1880..BARROW, Lieut. E. G., 7th Bengal Infantry.
 1882..MASON, Lieut. A. H., R.E.
 1883..COLLEN, Maj. E. H. H., S.O.
 1884..BARROW, Capt. E. G., 7th Bengal Infantry.
 1887..YATE, Lieut. A. C., 27th Baluch Infantry
 1888..MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially awarded a silver medal).
 1889..DUFF, Capt. B., 9th Bengal Infantry.
 1890..MAGUIRE, Capt. C. M., 2nd Cavy. Hyderabad Contingent.
 1891..CARDEW, Lieut. F. G., 10th Bengal Lancers.
 1893..BULLOCK, Maj. G. M., Devonshire Regiment.
 1894..CARTER, Capt. F. C., Northumberland Fusiliers.
 1895..NEVILLE, Lieut.-Col. J. P. C., 14th Bengal Lancers.
 1896..BINGLEY, Capt. A. H., 7th Bengal Infantry.
 1897..NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
 1898..MULLALLY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially awarded a silver medal).
 1899..NEVILLE, Col. J. P. C., S.C.
 1900..THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver medal).
 1901..RANKEN, Lieut.-Col. G. P. P., 46th Punjab Infantry.
 1902..TURNER, Capt. H. H. F., 2nd Bengal Lancers.
 1903..HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver medal).
 1904..MACMUNN, Maj. G. F., D.S.O., R.F.A.
 1905..COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907..WOOD, Maj. E. G. M., 99th Deccan Infantry.
 1908..JEUDWINE, Maj. H. S., R.A.
 1909..MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
 1911..MR. D. PETRIE, M.A., Punjab Police.
 1912..CARTER, Maj. B. C., The King's Regiment.
 1913..THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914..BAINBRIDGE, Lieut.-Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides (specially awarded a silver medal).
 1916..CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917..BLAKER, Maj. W. F., R.F.A.
 1918..GOMPERTZ, Capt. A. V., M.C., R.E.
 1919..GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920..KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922..MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923..KEEN, Col. F. S., D.S.O., I.A.
 1926..DENNY, Maj. L. E., M.C., 4/12th Frontier Force Regiment
 1927..HOGG, Maj. D. Mc. A., M.C., R.E.
 1928..FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
 1929..DENNY, Maj. L. E., M.C., 4/12th Frontier Force Regiment.

X.—GOLD MEDAL PRIZE ESSAY COMPETITION, 1929.

The Council has awarded the Gold Medal in this year's competition to Major L. E. Dennys, M. C., 4/12th F. F. Regiment.

1930.

The Council has chosen the following subject for the Gold Medal Prize Essay Competition for 1930 :—

“With the development of our frontier policy the tribesmen are gradually finding it more and more difficult to pursue their normal avocation of raiding; economic conditions in tribal territory, however, remain much as they were.

“Discuss how best we can assist the economic development of tribal territory and provide a field of employment for the rising generation of tribesmen.”

The following are the conditions of the competition :—

(1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army and Royal Air Force or Auxiliary Forces, who are members of the U.S.I., of India.

(2) Essays must be printed or type-written and submitted in triplicate.

(3) When reference is made to any work, the title of such work is to be quoted.

(4) Essays are to be strictly anonymous. Each must have a motto and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.

(5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1930.

(6) Essays will be submitted for adjudication to three judges, chosen by the Council. The judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution of the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.

(7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1930.

(8) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.

(9) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

By order of the Council,

G. B. HENDERSON, MAJOR,
Secretary, United Service Institution of India.

SIMLA :
1st October 1929.

MACGREGOR MEMORIAL MEDALS.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal, with Rs. 100 gratuity.

3. For especially valuable work a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

Note.

(i) Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

(ii) When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MacGregor Memorial Medallists.

(With rank of officers and soldiers at the date of the Award.)

1889..BELL, Col. M. S., v.O., R.E. (specially awarded a gold medal).

1890..YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

* N. B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Indian State Forces.

† Replacements of the M. M. ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MacGregor Memorial Medallists—(contd.).

- 1891..SAWYER, Maj. H. A., 45th Sikhs.
RAMZAN KHAN, Havildar, 3rd Sikhs.
- 1892..VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893..BOWER, Capt. H., 17th Bengal Cavalry (especially awarded a gold medal).
FAZALDAD KHAN, Dafedar, 17th Bengal Cavalry.
- 1894..O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895..DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896..COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897..SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafedar, 11th Bengal Lancers.
- 1898..WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899..DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900..WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901..BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902..RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903..MANIFOLD, Lieut.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafedar, Q. O. Corps of Guides.
- 1904..FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafedar, Q. O. Corps of Guides.
- 1905..RENNICK, Maj. F., 40th Pathans (specially awarded a gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906..SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides Infantry.
- 1907..NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908..GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909..MUHAMMAD RAZA, Havildar, 106th Pioneers.

MacGregor Memorial Medallists—(concl'd.).

- 1910..SYKES, Maj. M., C.M.G., late 2nd Dragoon Guards (specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911..LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.
- 1912..PRITCHARD, Capt. P. P. A., 83rd Wallahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafedar, Q. V. O. Corps of Guides.
- 1913..ABBAY, Capt. B. N., 27th Light Cavalry.
SIEDAR KHAN, Sowar, 39th (K. G. O.) Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914..BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915..WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916..ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F. F.) (specially awarded a silver medal).
- 1917..MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918..NOEL, Capt. E. W. C. (Political Department).
- 1919..KEELING, Lieut.-Col. E. H., M.O., R.E.
ALLA SA, Jemadar, N. E. Frontier Corps.
- 1920..BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921..HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy No. 4952, 106th Hazara Pioneers.
- 1922..ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923..BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924..HAVILDAR RAHMAT SHAH, N.-W. F. Corps.
NAIK GHULAB HUSSAIN, N.-W. F. Corps.
- 1925..SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926..HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927..LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928..BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMED KHAN, Havildar, Zhob Levy Corps.
- 1929..ABDUL HANAN, Naik, N.-W. F. Corps.
(With gratuity of Rs. 100.)
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a silver medal).

The Journal

OF THE

United Service Institution of India.

Vol. LIX. OCTOBER, 1929. No. 257.

EDITORIAL.

The past three months have produced remarkable instances of the development of aerial transport. A record is made to-day only to be broken to-morrow, and in these notes it is not possible to comment on other than events possessing the more striking features. In doing so one is forcibly reminded of the distance by which the mechanical is separated from the human or physical. Fifty years ago a champion sprinter could cover a hundred yards in even time, while to-day his speed is no greater. On the other hand, the Schneider Cup race this year was flown at a speed eight times as great as in 1913—the year of its inception.

It seems, therefore, that within certain very narrow bounds the limit of human physical capacity has been reached and cannot be exceeded. In matters mechanical, however, such is very far from being the case. For instance not so very many years ago, the expression “You might as well fly” was not without meaning. To-day it conveys rather less than nothing.

Owing to changes in policy in the construction of our two airships in England, the honour of circumnavigating the globe for the first time in such a vessel has gone to Germany. The ease with which the Graf Zeppelin accomplished this feat is noteworthy and reminds one of the phraseology of war time bulletins which invariably referred to an operation as having been carried out “according to plan.”

While yielding our meed of praise to German ingenuity and determination, which have been further evidenced in the record trip of the Bremen across the Atlantic, we must not forget our own doings.

Our victory in the Schneider Cup race was the outcome not only of super-organization but of skill of the highest order. Our sympathies go out to the Italian team who, in spite of being the victims of ill-luck, made a gallant, if unsuccessful, attempt to wrest the trophy from us.

The feat of the Duchess of Bedford in flying from Croydon to Karachi and back in eight days is not only a record in itself, but is an outstanding example of a determination to overcome difficulties. In her attempt last summer she failed, and in consequence was forced to spend several weeks at the hottest season of the year in the Persian Gulf. It would be difficult to conceive of a more unpleasant experience, but, nothing daunted, she made her second attempt, using the same machine but a different engine, and this time was successful. It is not customary perhaps to refer to a lady's age, but our admiration for the Duchess of Bedford's achievement is enhanced by the knowledge that it is on record she displayed considerable prowess as a cricketer in Simla some forty years ago.

* * * * *

The above short summary of recent events in the effort to revolutionize all pre-conceived ideas of time and space inevitably leads to reflection ; and, in pausing to think of their effect, we are, unless provided by nature with the imagination of a Jules Verne or a Wells, completely at sea. Eminent scientists and expert mathematicians can doubtless produce formulae to prove that even to speed there is a limit, but for the ordinary individual we seem to have reached a stage in mechanical development when it may truly be said that nothing is impossible. To statesmen and their military advisers, on whom rests the responsibility of formulating plans for defence, the age of mechanical invention in which we live presents problems of ever increasing difficulty. From the point of view of the preservation of order, and of the policing of the Empire, inventions which assist in the annihilation of time and space are welcome, but a moment's thought will reveal how much they hamper those whose duty it is to plan in peace against the possibility of war. As has been pointed out in these notes in a previous issue of this journal, the calculation of time and space is an essential factor in every military problem. It is a principle which admits of but little argument, and yet, unless our reading of everyday occurrences is completely wrong, it is becoming more and more patent that the calculation of this factor is an unenviable and well-nigh impossible task. The picture has perhaps been over-painted, but just

as to every cloud there is a silver lining, so to every problem there should be a solution, and we will attempt in a few words to comfort those with whom we have been hitherto commiserating.

* * * * *

In the first place, it is essential that in our preparations for future commitments we keep ourselves posted from day to day of the possibilities from a mechanical point of view for ourselves and of any potential enemy, and, secondly, that within the limits imposed by finance we make ready to meet those possibilities. In fact, we act as any prudent man does—we take out an insurance policy. If our information is accurate and up-to-date, and our measures carefully planned, the ability to calculate the factor of time and space should, at any given moment, not be impossible. The essential point to be borne in mind is that gone are the days when a plan once formed could be pigeon-holed for resurrection as required. The speed with which modern inventions and improvements succeed one another makes it vital that this plan should be continually under revision. This is both a wearing and a wearisome business, but of its necessity there can be no doubt.

So far, our suggestions for the assistance of those in positions of responsibility fall under two main headings: First comes information, and second counter-preparation, for which the help of our inventors is essential. Lest it be thought that these notes are an attempt to tender advice to men of vast experience, let it be said here and now that such is not their intention. Their sole object is to stimulate thought amongst the rank and file of our readers. Many of us are chained to the daily round of detail. We are but cogs in the wheel, but it is thought that an attempt, however superficial, to appreciate some of the difficulties that confront those in authority cannot fail to be advantageous.

We cannot help thinking, though the question is of a controversial nature, that the initial clash between any two Powers will, judged by the man-power standards of the Great War, be of a comparatively minor nature. Financial considerations will only admit of a limited force reinforced by the most up-to-date mechanical developments taking the field on the declaration of war. Victory will go to that force which most successfully combines human skill, morale, generalship, and mechanical superiority; but ultimate victory, brought about possibly by economic means or caused perhaps by aerial supremacy,

cannot be expected, we think, to occur at this stage except under exceptional circumstances. Thus, it is quite conceivable that some form of stalemate may ensue, and our object now is to see how this period of stagnation may best be overcome. The answer is not far to seek. Just as information and counter-preparation are essential features in the effort of a nation to attain security, so is it vital that arrangements for production when the crisis occurs are carefully and systematically prepared in peace. Pacts, whether at Locarno, or fostered by politicians—as in the case of the Kellogg Pact—may succeed each other with bewildering rapidity, and may assist towards the attainment of the era of peace and goodwill towards which the whole world is yearning, but it is essential for every thinking soldier, as long as he draws his pay, to prepare for accidents. A further point which must not be lost to view is that difficulties imposed on us by this increasingly mechanical age do not perplex us alone; they present no less a problem to other nations.

Let it not be thought that these few notes reveal bellicose tendencies. That is very far from being the case. They are merely an attempt to place before our readers one aspect of a case which has ramifications affecting the future of humanity in its widest sense.

* * * * *

Attention has previously been drawn in these notes to the value to be obtained from anniversaries, when, by a process of mental stock-taking, it is possible to realise whether progress has been made. Such an opportunity was afforded in August when, in celebration of the fact that the Boy Scout Movement had come of age, a Jamboree of 50,000 scouts, representatives of almost every nationality throughout the world, met at Birkenhead. This society, so small in its inception, so immense in its ideals, may now, with its membership of 2,000,000, be truly said to possess the force of a world movement. It is an amazing tribute to Lord Baden-Powell's knowledge of human nature that the small beginning which started twenty-one years ago has led to such an inspiring result.

Hunting has been called the image of war, but the Chief Scout in his wisdom, realised that scouting was the image of life. Its chief value, to our mind, is its incentive to overcome difficulties. To a true scout a problem is something to be solved, not avoided, and herein it is indeed an epitome of all that is best in life.

* * * * *

The attention of our readers is drawn to an interesting article which appears in this number of the Journal under the heading of "Education in the Indian Army." Though not everyone will be in agreement with all the author's views, he puts forward arguments which in many instances are irrefutable. To the British officer of the Indian Army of thirty years ago the suggestion to teach English to the Indian soldier will doubtless appear to be an act of heresy. Since then, however, times have changed and are, indeed, changing daily. New factors arise, and it is quite useless to shelter behind the shibboleth of custom. They must be faced and dealt with by new means. The steady and continuous growth of civil education has made a marked difference in the educational qualifications possessed by the recruit of to-day. Only a comparatively few years ago the vast majority of recruits in the Punjab were illiterate. We do not possess any data on which to base our figures, but we do not think we are over-stating the case if we say that to-day it is the minority which is illiterate, while quite a sensible proportion, possibly ten per cent, have a smattering of English.

While conceding that Roman Urdu is a genuine attempt to bridge the problem, we cannot help feeling that it is unlikely to achieve its object. To learn it is a laborious task and, we are inclined to think, an unnecessary one. A general knowledge of English will not come at once, but we feel that it should be given every encouragement. The Indian soldier, if he is to get advancement, is compelled to learn Roman Urdu, and we question if he is any the better for it. He regards the examination as an obstacle in his path. It is doubtful whether he is possessed of the philosophy of Socrates who declared that an unexamined life was not worth living.

* * * * *

It is hoped that the article in this number of the Journal on the New Manual of Military Law will be useful to officers preparing for examinations. Its author is a man with wide legal experience, and the results of recent examinations for the Staff College has made evident that the Military Law Paper has proved a stumbling-block to many.

A DISCUSSION ON THE OFFICIAL HANDBOOK ON MECHANISATION.

By

BT. LIEUT.-COL. G. LE Q. MARTEL, D.S.O., M.C., R.E.

No one can fail to be impressed by the new handbook on mechanisation which has been issued by the War Office. In addition to being a guide for the method of employment of mechanical vehicles it contains a wealth of information and data on the whole subject. At the same time many aspects are left open and a discussion of the subject, using the handbook as a basis, may be of assistance in attaining the "open and flexible mind" which is so aptly referred to in the introduction to the book.

The Vehicles.

The book starts by dividing mechanical vehicles into three groups: armoured fighting vehicles, armoured carriers, and unarmoured vehicles. This division does much to simplify thought and discussion on the specification and capabilities of the machines themselves. The main point that arises for discussion in this connection is the armoured machine gun carrier for the infantry. The first of these small fighting machines appeared early in 1926 in the form of the Morris tankette and this was followed by the early models of the Carden type. Neither of these were very satisfactory to start with, but they led to much experimental work and trial, and by 1928 it had been decided that further development should be on two lines, *i.e.*, armoured carriers and light tanks. The proposal that small fighting machines of this nature should be tried had been urged by the author and by others ever since the conclusion of the Great War; the underlying idea being that by using large numbers of small machines the great danger which exists when anti-tank weapons are firing against small numbers of large machines would be largely obviated. In their smallest and cheapest form these machines come under the heading of armoured carriers, and the more expensive type becomes the light tank. As the whole subject is under experiment at the moment it is not possible to give any details, but speaking generally, the armoured carrier has good armour protection in front, some protection on the sides, is small and inconspicuous, but cannot fire with any accuracy on the move. The light tank is a superior

article being capable of a much higher speed, possessing a revolving turret and providing a steadier platform for firing in movement, but it costs perhaps five times as much as the armoured carrier.

From an infantryman's point of view it is generally agreed that the main requirement of the present day is some form of tank or vehicle which will enable him to advance at once on machine guns which are holding him up in the first contact in open warfare. If we have very expensive tanks they will be few in number in peace time, and in the early stages of a war they will be retained for use in the main battle. They will not be available for the assistance of infantry in advance guard or flank guard duties. The infantryman does not need a tank with the high specification which is given for the present light tank; he does not require a machine that can fight by itself among the enemy, or travel at 30 miles an hour, but he does need a machine that is "expendable," so that he will be allowed to use it whenever he can save life and time by doing so. At present it is stated that the armoured machine gun carrier is not suitable for this work and that it is in reality only a means of obtaining closer support from the battalion machine guns in battle. Covering fire from machine guns has often failed to locate and silence enemy machine guns in the past, and we definitely need something that can approach right up to the machine guns and neutralise them with certainty. It is not clear why the armoured carriers should not be able to do this. They have full protection in front and, if properly used in sections, they can protect their flanks. Though they cannot fire accurately on the move they can sprinkle the enemy, and can halt momentarily behind small mounds or cover for aimed fire. If used in reasonable numbers they will take a great deal of stopping unless the enemy possess a very large number of anti-tank weapons.

All these points are, however, being considered and much will be learnt from the trials with the experimental brigades at Home. Whether it is best for some or all of the battalion machine guns to be in armoured carriers or light tanks, or whether it is better to have the fourth battalion in the brigade as a light tank battalion will, no doubt, become clear as the setrials proceed; but it is certain that the infantryman needs some means which must be rapidly at hand to enable him to knock out at once the machine guns which have caused so much delay in the past and are the beginning of reduction to trench warfare.

The Mobile Troops.

The book divides the organisation of the army into mobile troops and combat troops, and discusses how mechanical vehicles can assist them. In past history the mobile troops were entirely cavalry, and they were always divided into light and heavy cavalry. The heavy cavalry have varied greatly in characteristics at different times, but they have always belonged to the combat troops. At times they carried much armour and their mobility was no greater than that of infantry ; at other times they were more lightly equipped and formed a mobile portion of the combat troops, but their mobility was always much less than that of light cavalry. We will, therefore, use the expression mobile troops to refer to the highly mobile portion of the army corresponding with the light cavalry in the past and not to the portions of the combat troops, such as the heavier types of tank and track vehicles, which belong essentially to the combat troops though they possess greater mobility. The policy of these light mobile troops in the past has been to hit the enemy wherever and whenever he was weak, and to attack him in flank or in rear. The commander of the force would explain to the commander of the mobile troops where and when he wanted to meet the enemy combat troops in the main battle ; whether he wished one enemy column to be delayed while he dealt with another or whether the mobile troops were to endeavour to weaken an enemy column by minor attacks and raids so as to force him to put out detachments and thus arrive weak and partially exhausted on the battlefield. These and other similar duties would be imposed on the mobile troops, and they were all to be solved by the use of mobility. Mobile troops were not intended to exhaust themselves by attacks on the enemy if he held a position in strength. In the main battle they were used to attack the enemy on the flank and in rear and finally for pursuit.

The desire to strengthen the hitting power of the mobile troops has always existed, but has usually led to a great loss in mobility, and has consequently led to a change in the rôle of these troops. The recent armoured force which was formed on Salisbury Plain was a clear example. This force started as being essentially part of the mobile troops. It possessed armoured cars and light tanks with a high degree of mobility, but in order to increase the hitting power of the force the main body consisted of a battalion of medium tanks supported by a brigade of field artillery. Whereas the lighter fighting

vehicles possess or will shortly have sufficient mobility to move from 100 to 150 miles a day, the medium tanks weighing as they do from 12 to 16 tons are unlikely to have more than one-third of this mobility for many years. Thus the armoured force was in reality not so much mobile troops as a portion of the combat troops endowed with about double the mobility of normal formations. These limitations of the medium tanks were no doubt realised at the time, but no other vehicles were then available for the formation of an armoured force.

To-day the position is different, the development of reliable light tanks with a high degree of mobility is in sight, and there are many who think that the time is coming when we can resurrect the predominant part played by mobile troops in the past by using light tanks on ground that is suitable for their employment combined with cavalry for use on that which is less favourable. The increased stopping power of modern weapons tends more and more to restrict the scope of cavalry working alone, and it is hoped that by the use of light armoured formations the great power possessed by light cavalry as mobile troops in the past may be restored.

The light armoured brigade is the formation required for this work and the book gives two alternative organisations for a light armoured brigade. In each case the light tank is the basis. In one case the formation includes 2 light tank battalions and an armoured car regiment, and in the other case there are 3 light tank battalions and no armoured cars. The most suitable organisation depends on the nature of the country and on the mechanical capabilities which the light tank is found to acquire when it has reached a more final form. The greatest possibilities can be foreseen when a number of these light brigades are used as mobile troops well ahead of the main body. It is only necessary to consider the effect that they would have had on the advancing enemy columns in 1914 to realise the scope of their work. While on the march these columns would have been constantly threatened with a sudden attack coming in from a flank. Weak flank guards would have been attacked and scattered, and the main bodies would have been constantly forced to take up a defensive position, at any rate temporarily, for security, and considerable delays would have resulted. Communications would have been attacked, forcing the enemy to leave valuable detachments to guard important brigades. Finally light brigades

would have been used in the main battle to attack the enemy in flank or rear. Thus a small body of highly trained men such as we possess in our expeditionary force might have been used in this manner, and might well have produced a decisive effect on the conduct of the war. It must however be remembered that although, as will be shown later, it is far easier for us to produce armoured forces than for a nation with a conscript army, it is obvious that the existence of light armoured brigades in the B. E. F. in 1914 would inevitably have forced the enemy to adopt measures to counter them. Mobile anti-tank weapons must at least be expected. Hence it is essential that light armoured brigades should possess some close support artillery, and this is allowed for in the establishment by the inclusion of a close support tank battery. This battery is at present entirely experimental, and what is required for this work would appear to be something like a 3 pr. gun on a light shielded tank which can give very close support to the light tanks without actually assaulting in and among the enemy; for which a greater degree of all round protection is needed. Whatever is designed, it must be light in weight or it will not have the necessary mobility to keep up with the light tanks.

These light brigades are formed either by themselves or with cavalry brigades into divisions, and some divisional troops, mainly artillery and engineers for bridging and demolitions, are included but whatever is added must be highly mobile. The temptation to add a few mechanised infantry to increase the holding power, or some heavier tanks or artillery to increase the hitting power against defensive positions, will always be there, but if we fall to these temptations, the light armoured brigades and mobile divisions will become more in the nature of faster moving combat troops and will not have the high degree of mobility required by mobile troops. These formations in their present proposed form are highly mobile, and as they possess a fair degree of armour protection they can take risks and move rapidly regardless of occasional machine gun ambushes. They possess a simple straightforward organisation; there are many things they cannot do, but within their rôle they should be able to do their work well, and this rôle has led to decisive results in the past.

The Combat Troops.

The work of mechanical vehicles used to assist the combat troops raises many controversial points. At the present time (August

1929) two experimental brigades in England are trying out the effect of including one light tank battalion instead of the fourth infantry battalion in the brigade. That some assistance is required by infantry battalions to overcome machine guns without delay is obvious, and has been discussed earlier in this paper. Experiments will show among other things how this may best be achieved. The result may lead to a demand for a considerable increase in the number of light tanks for use with the infantry. This was discussed by the author several years ago in many papers, but these dealt with the more distant future whereas we are now dealing with the present or immediate future.

The next point in which much progress has been made by the use of mechanical vehicles lies in the increased mobility which can be given to portions of the combat troops. A satisfactory type of mechanical first line transport is being evolved, and units which are thus equipped can be moved rapidly over long distances by being embussed. This form of mobility should not however be confused with the mobility of the mobile troops as already described; the vehicles would be entirely unarmoured, and could not risk an encounter with a machine gun ambush. When approaching the enemy the ground would have to be searched and this takes time. Moreover unarmoured vehicles should not normally be sent ahead, in front of their own main body, to meet enemy combat troops. To give the enemy a surprise blow is of little value if the rest of the main body is too far away to profit by this and complete the defeat of the enemy. That it is of great value to be able to increase the mobility of a portion of the combat troops is obvious, particularly if this can be combined with the provision of a number of light tanks or armoured carriers to enable the infantry to overcome the delaying action of enemy machine guns, but their correct use is to employ them on a flank or in such a way that the enemy is surprised and struck at the same time that he is being pressed or attacked by the remainder of the main body, and with this in view it may often be preferable to use the slower moving combat troops first and deliver a surprise with the faster moving combat troops later. In any case it is certain that the side possessing mechanised first line transport and which has thus the power of moving large portions of the combat troops with rapidity will have a very great advantage in the main battle as compared with a side that has retained horse transport. The

employment of these more mobile combat troops can be compared to that of the heavy cavalry in the past.

The above two methods by which mechanical vehicles can assist the combat troops are not unduly controversial, but a third and more novel method by which these vehicles can assist in this way is described in the book in the form of attacks by medium armoured brigades against the enemy main position. If the mobile troops can use sufficient light armoured brigades and carry out their work well the battle may be half won before the main bodies meet in combat, but we are now considering the main battle between the combat troops.

We have already seen that the possession of light tanks or armoured carriers by the infantry may have far reaching results, and that the power of giving increased mobility to a portion of the combat troops is of great value, and we must now consider this third aspect of the employment of a medium armoured brigade. A medium armoured brigade consists essentially of two light tank battalions, one medium tank battalion and two close support tank batteries, and the book lays down for our guidance that the normal employment of one or more medium armoured brigades attacking in co-operation with normal formations against the enemy main position would usually take the form of a flank attack. The attack would be led by the light tanks and supported as far as possible by artillery fire. The light tanks will overrun and crush the infantry defences and make the anti-tank guns disclose their positions. They are closely backed up by the medium tanks and close support tank batteries, and these deliver a concentrated fire against the enemy anti-tank weapons. In this way the attack proceeds from bound to bound, the normal formations pressing forward and taking full advantage of the opportunities afforded by the advance of the armoured brigades. There are of course many difficulties to be overcome in launching an attack of this nature; the timing of the attack, the provision of artillery covering fire, and the general control of the battle all provide points requiring much thought and training before success can be hoped for, but if these difficulties can be overcome attacks of this nature may lead to far greater successes than can be expected by attacks delivered in a more normal manner.

It will be noticed that the medium armoured brigade is the same as the light armoured brigade except for the fact that the light tanks have the support of 30 medium tanks and a second close support

tank battery, and one is inclined to ask whether the mobile troops (light brigade) could not be used for this work with the assistance of additional close support artillery in the form of shielded light guns on track vehicles. This is a very much simpler and cheaper weapon than the medium tank which is in the nature of a mobile fort and it would appear to fill our requirements. In this way there would be no necessity for this second armoured formation in the form of a medium armoured brigade, the mobile troops in the form of light armoured brigades being used both for the long distance work and (with the assistance if possible of more light shielded guns) for threatening and attacking the enemy in flank. It may however prove sounder not to employ the light or medium armoured brigades against the enemy main position but to use light brigades alone to work round the flanks, and so force the enemy continually to extend that flank to protect his rear.

The general course of the main battle between the combat troops would then be as follows : The normal formations close up to pin the enemy to the ground on their front while the commander decides on his plan. For his main blow he keeps his mobile combat troops in hand ; these consist of lorry carried infantry, light tanks or armoured carriers and mechanised artillery, and they will be marching either to a flank or in rear of the other columns. At the right moment these are launched to deliver a surprise blow on the enemy flank at the same time that he is being pressed by the normal formations in front. Wider still on the flank come the mobile troops (light brigades), which are used to threaten and attack the enemy in flank and rear wherever possible, though not against strong defences. A well timed attack using these three formations corresponding to the infantry, heavy cavalry and light cavalry respectively should usually be decisive.

We now come to the case when the enemy has had time to prepare fairly elaborate defences, and the position approaches trench warfare conditions. This case is fully dealt with in existing manuals and needs little alteration as the result of recent developments and thought. The light tanks would probably be unable to cross the obstacles which would have been created by the enemy, and the medium tank comes into his own and leads the assault. If our reasoning has been correct it may be that few or none of these medium tanks will have been required up to this stage, and that the medium tank can

be kept back and brought up like heavy artillery for the main battle only. If this proves to be the case it will solve many administrative and mechanical problems connected with these comparatively heavy fighting machines.

Armoured formations in peace.

In these discussions the case has been considered more from the point of view of our army possessing a reasonable proportion of these fighting vehicles against an enemy possessing fewer of them, and few or no armoured formations. This is reasonable enough when we consider that there is little chance of our meeting such opposition in our small wars, and any conscript army that we might meet in a great war is very handicapped compared with ourselves in the production of armoured formations. With us we can create very large savings by comparatively small reductions in strength because our pay bill is a large one, and it is largely by this means that we have been able to make such head way in the production and provision of these mechanical vehicles. With a conscript army only small savings can be effected by reduction in numbers as the pay bill is small, and the change over from a large conscript army to a small mechanised army is not one which is likely to be faced by any country in the near future if they have a long frontier to defend. This point is referred to in the book as follows: "The presence of considerable bodies of tanks on both sides in a suitable theatre of War is likely to cause considerable modification in operations generally. Such formations do not, however, exist at the moment and as the subject is therefore purely theoretical it will not be further discussed in these pages." In this connection it should be remembered that no armoured formations exist in our army at the moment. Our work up to the present in the production of machines has been mainly confined to research work, and it is seldom safe in peace time to enter production on a new model of fighting vehicle until it has been under trial for several years. Progress in equipping the army with these machines will therefore be very slow for some years, though it is hoped to produce further experimental armoured formations for trial in England within a few years. There is however no reason why we should lag behind in studying the problems connected with this work and this point is emphasised in the introduction to the book.

Administration.

That there are considerable administrative difficulties connected with the use of armoured fighting vehicles is obvious, and these are explained in the administrative chapter, and some of the solutions that have so far been found are given in the book. It is possible however that we may find the supply problem less serious than it appears to be at first sight. The most alarming figures were produced for the requirements of the old armoured force, and this gave rise to the idea that the supply problem alone would throttle any extension to the mobility of armoured forces. It should however be remembered that this armoured force was a mixture of combat troops and mobile troops, and that the combat troops which should not form part of the mobile troops at all consumed over three quarters of the petrol required by the force. A medium tank will probably be found to consume six times as much petrol and oil as a light tank. If therefore we restrict the mobile troops to the lighter types of fighting vehicle the supply problem assumes reasonable proportions. For instance four 30-cwt. lorries will probably be found to carry the petrol and oil required by a light tank battalion for 100 miles. The heavy types such as the medium tanks require considerable supplies of every kind, but if they are marching with or near the main bodies the problem of supply is not so difficult. The main body already requires large supply trains for maintenance, and the additional stores required for a normal proportion of tanks is not overwhelming.

India.

India has been quite openly accused at Home of being the retrograde force holding back all progress. This may or may not have been true in the past, but it is certainly not true today. In unarmoured mechanical vehicles India is ahead of the home country and the six wheel lorry is well established. With the heavier types of track vehicle such as medium tanks and dragons India has refused to participate, and quite rightly, since these vehicles possess far too little mobility for this country. That a light tank suitable for use in India and possessing sufficient mobility can be produced is certain, and it is to be hoped that this will be achieved during the next few years. When this has materialised many uses will be found for such a machine in this country.

Conclusion.

Every war in the past has been followed by a period of staleness in the Army during which retrograde reaction has taken place, but the period after the Great War has proved a notable exception in our army, and particularly during the last few years. This is no doubt partly due to the extensive writings of Brigadier J. F. C. Fuller, who reminded the whole army most forcibly of the danger of this reaction from the day of the armistice onwards, and it is probably also due to the progressive mechanical spirit of the present generation. Whatever may be the cause, the progressive spirit is there, and is evidenced by this new handbook on mechanization. No other nation could have produced this book, which contains the result of much practical trial and thought, and our future progress in this direction will be most closely watched by all other countries.

THE EUROPEAN MILITARY ADVENTURERS IN INDIA :
BENOIT DE BOIGNE.

By
C. GREY.

Of all the Soldiers of Fortune, for whom India in the Eighteenth Century was a Golden Age, none was of such a romantic figure, or more successful than this Savoyard. It was he who raised and trained for Madhoji Scindia, the greatest and best regular army ever owned by a native Prince in India, and one which gave Wellesley and Lake very stern fights at Aligarh, Assaye and Laswari after its creator had left India.

Benedict de Boigne, son of a hide merchant of Chambery, was born in 1751, and early decided for a military life. As a commission in a regular French Regiment demanded at least eight quarterings, or three centuries of noble descent, it was, for him, impossible. However, this rule did not extend to the Swedish, Swiss, German, or Irish regiments in French service, and as these were open to Frenchmen of humble birth, he managed to secure an ensigney in the Irish Regiment of Clare. We may here remark that these regiments were not, as generally supposed, recruited exclusively from Irishmen, but had always a proportion of Frenchmen or other foreigners in their ranks, and their officers were interchangeable with those of other foreign regiments in the French service.

De Boigne served in Flanders and at Mauritius for about three years, when, finding his prospects not very promising, he resigned, after securing a captaincy in a Greek Regiment in the Russian service. A curious mixture, one might remark. The Russians were then at war with the Turks, and in a descent on the Island of Tenedos, de Boigne was taken prisoner and interned at Scios, where he remained until the close of the war. His Russian commission having lapsed, he proceeded to Smyrna where he fell in with some Englishmen whose accounts of India so fascinated him that he decided to try his luck in that El Dorado.

Accordingly, he joined a caravan setting out for Baghdad, thus proceeding overland as so many adventurers had done before him. Arrived there, he found that the war between the Russians and Turks precluded any further progress, and had to return to Aleppo. Not to be balked, he passed over to Cairo, being wrecked at the

mouth of the Nile, and taken prisoner by the Arabs on the way. They, however, not only released him, but helped him on the way to Cairo, a tribute to his personality.

At Cairo he so interested the British Consul-General, that he not only gave him a free passage to India, but letters of recommendation which, on his arrival in India, procured him an ensigncy in the 6th Madras Sepoys in the year 1778. Being away on convoy when the regiment was cut up, and the remainder taken prisoner by Tippoo Sultan at Polliorein in 1780, he escaped their fate. In 1781 he resigned because he considered the prospects inadequate, though other reasons have been assigned, one being that he had taken liberties with the wife of another officer, and another that he was passed over for an appointment. Both are incorrect, as he was acquitted of the one and declined the other when it was offered him.

Having secured a recommendation to Warren Hastings, he proceeded to Calcutta, where he was again fortunate enough to find an English officer who put him up and financed him, till he obtained an interview with Hastings. To him he confided his intention of journeying overland to Russia, and asked for letters of introduction to the rulers of the various countries and Indian States through which he would pass. Hastings, greatly impressed, furnished all he desired, amongst which was a letter to the Nawab of Oudh at Lucknow.

He was again very fortunate, for the Nawab not only gave him a khillut, he subsequently sold for Rs. 4,000, but also letters of credit on Kabul and Kandahar for Rs. 12,000. At Lucknow he made the acquaintance of Claude Martine, afterwards his lifelong friend and business partner for many years. From Lucknow he went on to the camp of Madhoji Scindia, ostensibly on a visit, but really we think to see how the land lay. Being very suspicious of this wandering stranger, Scindia had his baggage plundered, and though it was afterwards restored to him, his progress was stopped, as his money and letters of credit were retained.

Being now penniless, he applied for military employment to the Rana of Gohad, whose fort of Gwalior, Scindia was besieging. The Rana refused him, as he had already employed the battalions of Rene Medoc, now under a Scotch ex-watchmaker, named Sangster. He then applied to Pertab Singh of Jaipur who declared himself quite

willing to engage him provided the necessary permission was given by Warren Hastings. This was refused; whereupon de Boigne went to Calcutta, and by a personal interview, secured permission, only to find on his return that Pertab Singh had changed his mind. As a solatium, however, he gave de Boigne Rs. 10,000.

Meanwhile Scindia, having met with some military reverses from Sangster's battalions, decided that similar units were worth having, so early in 1784 engaged de Boigne to raise two battalions of 800 men each, with four guns per battalion, and to be officered, or commanded, by Europeans. These were speedily organised, for de Boigne was a man of indefatigable energy, and found men to whom he could impart it. The first battalion was commanded by a Dutchman named Hessing, the second by Fremont, a Frenchman, with whom were associated some minor Europeans or Eurasians, and the guns were worked by Europeans, mostly deserters, runaway sailors, or half-caste Portuguese, who were the N. C.Os. or gunners, the matrosses or gun crew being Indians.

In November 1784 the new formations were employed at the storming of Kalinjar, near Allahabad, and acquitted themselves so well as to gain the approbation of the Mahratta general, which they understood as license to plunder the town. In January 1785 they were present at the taking of Delhi, which fell to Scindia, who held the senile old Mogul Emperor in pawn. Till February 1787 they saw nothing but a few minor actions, when in that month they drove off the Rajput cavalry, numbering some 10,000, who for the first time in history were routed by hitherto despised footmen, their repeated charges against the indomitable squares always proving of no avail.

Here the artillery also distinguished themselves, for though the cavalry got in amongst them and cut many down, they did not capture a single gun, or gunner. But the bravery of de Boigne's men was discounted by the inertia of the Mahratta horse, and he was compelled to retire within the walls of Ulwar, losing nothing in his retreat.

The next action was at Chaksana, in April 1788, and at Agra in June of the same year, both hard fought battles, where he gained more honour and glory. Having thus justified himself, de Boigne asked sanction to increase his force to ten battalions, which, on being

refused, he quitted Scindia's service, and proceeded to Lucknow where he set up in business in cloth and indigo with Claude Martine.

Repenting shortly afterwards, Scindia implored de Boigne to return on his own terms, which he did in January 1790. The new army constituted ten battalions of 800 each, 500 cavalry, and 60 guns of various calibre, the whole officered by over 100 Europeans, the senior officers all being Frenchmen or Continentals at the beginning, though later a few Englishmen and Anglo-Indians were given command. In supreme command of this force, de Boigne met the combined forces of the Moghul rebel Ismail Beg, and the Rajas of Jaipur and Jodhpur at Patan Tanwar in the Shekawati district on the 29th June, 1790. The two opposing forces were considerable, de Boigne having some 12,000 Mahrattas beside his own men, and the enemy mustering 12,000 Rahtore cavalry, 25,000 foot and 130 guns.

After the opening skirmishes the Mahrattas took no part in the battle, which resolved itself into a continual succession of cavalry charges on de Boigne's squares and artillery, all of which were repelled with great loss to the enemy. These proving unsuccessful, a general advance was ordered and the enemy completely routed, de Boigne taking 107 guns, 6,000 stand of arms, 15 elephants, 200 camels, 513 horses, and over 3,000 oxen, as well as 12,000 prisoners. His own losses were 700 of whom 130 were killed, whilst the enemy dead not only covered the field, but the pursuit of some ten miles. In the afternoon he took the town of Patun, which afforded more booty, including 2,000 horses.

The defeat of the hitherto invincible Rajput horse so infuriated the Raja of Jodhpore, that he assembled every Rajput between 16 and 60, and adding to these 100,000 foot and twenty-five guns, awaited battle at Merta, a walled city about 30 miles east of Ajmer. At dawn on the 12th September 1790, de Boigne, who had 30,000 horse, his own ten battalions and 80 guns, taking advantage of the fact that night attacks were very unusual in India, fell on the camp and nearly destroyed the foot soldiers before the Rajputs awoke to the danger.

Nobly they redeemed their sloth, for they charged down on two of de Boigne's battalions, who had imprudently advanced too far and cut them up. Seeing this, de Boigne formed his others into

squares linked up by the guns, against which the waves of horsemen beat in vain until but 4,000 were left. These, donning yellow turbans in token of devotion to death or victory, renewed their charges until only 15 were left, who, dismounting, advanced on foot against the squares, where they too met the death they desired.

De Boigne records that at times the squares were absolutely surrounded and invisible amidst the swarms of horsemen, from whom the gunners saved themselves by taking refuge within the squares until the attacks were driven off, when they emerged and opened fire. His own loss was about 900 including many gunners, most of whom were slain by the sabres of the Rahtore horse. The battle was over by ten, and at three the columns assaulted and took Merta, "of which the pillage lasted three days, and to mention all its particulars would make your mouth water. The ladies at first were displeased at our abrupt entry, but at length grew more kind, acknowledging that none but the brave deserved the fair."

This account by one of de Boigne's officers was published in the *Calcutta Gazette*, and rather upsets the popular idea of the Rajput ladies; but may be the "fair ones" were not Rajputs. So pleased was Scindia at this victory, that he sanctioned the formation of two more brigades and cavalry, artillery, etc., bringing the disciplined forces up to 30,000, officered by 130 Europeans of all nationalities, including some Eurasians, such as Butterfield, Evans, Hearsey, Skinner, and Vickers. Besides these there were about 350 drill sergeants, military artisans, and gunners, recruited from the peripatetic military rascality of India, and of the same classes as the officers.

Of these latter, Compton remarks that "though in ordinary times they reflected little credit on the European, they were extraordinarily brave and stubborn in action." His next battle was that of Lakhairi in September 1793, where he defeated the army of Tukoji Holkar, with which were three disciplined battalions under the Chevalier Dudrenec who were annihilated, losing every European officer and gunner present with them. The last battle in which his troops were engaged was that of Kardla, where they defeated the army of the Nizam of Hyderabad, which mustered 110,000 men, amongst whom were 17,000 disciplined infantry under command of Colonel Raymond, and another 6000 belonging to the two Free Companies under an Englishman named Finglas, and an American named Boyd.

As, owing to ill health, de Boigne was not present, the battle was fought by his second in command, and ultimate successor, Perron, an ex-sergeant of French Marines. Continued ill health induced de Boigne to resign and, in December 1795, he left for Calcutta escorted by 600 Pathan Horse, whose mounts, arms, and equipment were his own personal property. His other effects were carried on four elephants, 150 camels, and 150 bullock carts, with which he arrived at Calcutta in June, having stopped at Lucknow for some time to close his business there.

At Calcutta he was honourably received by the Governor-General, who purchased the cavalry horses, and equipments, and enrolled the men in his own forces. In September 1795 he left India, taking with him a son and daughter by a Persian lady, the latter of whom left descendants who carry on the name and title of Benedict, Count de Boigne. He died at Chambéry in June, 1831, closing an honourable career by an equally honourable and respected old age. His character is thus summarized by Ferdinand Smith, one of his officers :

“I have seen him daily and monthly rise with the sun, survey his arsenal, view his troops, enlist recruits, direct the vast movements of his brigades, raise resources and encourage the manufacture of arms, ordnance and stores ; harangue in his durbar, administer the affairs of a jaidad of thirty lakhs of rupees, carry on an intricate system of intrigue in various courts, superintend a private trade of many lakhs, keep his own accounts, public and private correspondence, and direct a most complicated political machine.”

EDUCATION IN THE INDIAN ARMY.

By

A COMMANDING OFFICER.

All education must be based on the medium of instruction, that is to say, on the language in which the instruction is imparted. In the Indian Army this question of language is more important than it is in most cases. It is desirable, almost necessary, that the whole army should speak and write one and the same language. That language must be the medium of all instruction.

Soon after the termination of the Great War, the whole problem of education for the Indian ranks of the Indian Army was reviewed. It was then decided that the common language for instruction and for intercourse should be, what is called, Roman Urdu.

Since that decision was reached some years have passed. The time has come when we can consider results, and determine whether the Indian Army has been working on the right lines in this regard.

Probably everyone will agree that progress in general education has been made. It is equally probable that all will admit that the progress made in disseminating in the army the language known as Roman Urdu has been slow, painfully slow.

The writer suggests that there has been no real practical progress at all, in this vital branch of the educational policy. Further, he suggests that until a common language for the whole army has been firmly established, progress in all other branches of education will be illusory and temporary. He suggests that the progress made, such as it is, in the other branches of general and military education, has been attained through the medium, not of Urdu written in the Roman character, but through that of the various dialects spoken, in their homes, by the Indian ranks of the Indian Army, each written in the Roman character.

To Roman Urdu, as the universal language for the Indian Army, there is but one possible rival, namely English. In the post-Great War review referred to above the claims of these two rivals were considered. As already stated, the decision was given in favour of Roman Urdu.

The purpose of this article is to show that the decision was a wrong one, and that no real progress in education, nor towards the ideal of providing a universal language for the Indian Army, will be possible until that decision has been reversed.

One advantage that is claimed for Roman Urdu is that it is more nearly a national Indian language than is English. There is some truth in the claim ; but we cannot avoid the fact that the ordinary language or intercourse between educated Indians of different races is English, not Urdu. The latter is not a modern language in the true sense of the word. It contains no words to describe many of the activities and common objects of modern life. Particularly is this true in science and in military matters. Nor has the language the remaining vitality to make new words for itself. It lamely borrows words from English.

The civil educational authorities of India will have nothing to do with Urdu written in the Roman character. They scorn the mongrel.

It is claimed that illiterate Indians find it easier to learn Roman Urdu than to learn English. Probably it was this idea that carried the day in favour of Roman Urdu. Tests, in which classes of sepoys, each class learning one of the languages, Roman Urdu and English, were considered to have proved the truth of the above idea. If we examine these tests, we find that classes of twenty or so illiterate sepoys were set to learn, some classes Roman Urdu, and some English. The instructors in both cases were experts. The students were imbued with the competitive spirit and worked equally hard and keenly, each to beat the other.

The writer suggests that what these tests did prove was that, given equally good instructors, classes of equal size, and above all, equal incentive to learn, Roman Urdu can be taught to Indians more easily than can English. Unfortunately in the army, as a whole, a totally different set of circumstances exists.

Every sepoy knows that outside the army a knowledge of Roman Urdu will be of no value to him. For this reason, only the few who wish or can hope to rise in the army take much, if any, interest in learning it. On the other hand, every man knows that a knowledge of English would be of the greatest value to him, both within and without the army. This means that in the case of Roman Urdu the all powerful motive of self-interest is, in most cases, absent, or at least far less strong than it would be in the case of English.

The silly prejudice entertained by British officers against the English speaking Indian soldier was, in the post-war review, accepted as a powerful argument against the adoption of that language for the

Indian Army. This prejudice was, and is, a survival of other days. It should not be allowed to stand in the way of progress.

The only instructors in Roman Urdu that are available in the army are the few Indian officers and non-commissioned officers who have qualified at the Army School of Education. Probably, the proportion of men so trained is far less than one for every two hundred sepoy to be taught. Further, in regard to Roman Urdu, these instructors cannot be called experts. They spend, at the most, twelve months at the school, during which time they have much besides this language to learn. The period, too, includes holidays and breaks. Most of the men who qualify at the school relapse, soon after returning to their units, into their own dialects, written in the Roman character.

This brings us to the point that the very similarity between Urdu and most of the dialects spoken by the men of the army militates against the use of the former. It is so easy, and so natural, for men to speak or to write the dialect, with a few Urdu and "urdu-ized" English words thrown in, that most sepoys adopt the habit unconsciously. The resulting mixture soon develops into a regimental lingo which, within the regiment, passes muster as Roman Urdu. Usually, it is quite unintelligible to anyone not of the regiment concerned. English, on the other hand, is so different from all Indian dialects that this danger would not arise in its case.

Roman Urdu in no way contributes towards co-operation between the Indian Army and the British Army in India. The value of English in this respect does not need to be emphasised. Co-operation is the soul of success.

In Roman Urdu there exists no literature. The wealth of literature which enriches true Urdu in no way helps our problem. Until a short time ago the only works written in the so-called language of Roman Urdu were the *Fauji Akhbar* and the *Manual of Sanitation*. Than the latter no more uninteresting reading could exist. Now, a few military manuals have been translated into Roman Urdu and published. These suffer from the defects of all translations. No one can be expected to read them for pleasure, and least of all a beginner in the study of a strange language. Anyway, they are far above the heads of ordinary recruit sepoys. The Roman Readers, recently published under the aegis of the Army School of Education, are better; but no one wishes to read the same thing over and over again, in school and out of it.

Contrast this state of affairs with that existing in regard to English. Consider the vast store of simple, yet absorbing, literature that is at the command of the student of the English language. With encouragement and facilities at his disposal, the sepoy would learn to read English as does a British child: A little instruction, that is to say, and a great deal of personal effort for the love of the stories. From reading to writing is but a step.

Our last argument in favour of English concerns the British officers. As a class they are no experts in English literature; nevertheless they know enough English to be able to teach it to their men sufficiently well for all practical purposes. There is, too, a fascination in teaching one's own language to another. If the British officers could teach English, and in English, for them the terrors of the regimental school would disappear; and their own educational resources would be at the disposal of their men instead of being hidden away from the latter as at present. Education in the Indian Army would then no longer be a side line in the hands of Indian officers and non-commissioned officers. It would take its proper place as one of the main duties of the British officers. Some will say that it is so now. In theory it is, in fact it is not. Roman Urdu, the British officer's bugbear when it is applied to himself, is to blame.

To sum up: If English were to be substituted for Roman Urdu as the universal language of the Indian Army, we would replace reluctant students by keen enthusiasts. The students would have at their disposal a really fine and suitable literature. As soon as the initial prejudice had been overcome—a matter of a few months—we would have the hearty and efficient co-operation of the British officers in instructing the men. As the study of English made progress we would eliminate the regimental lingos. An English speaking Indian Army could co-operate with the British Army far better than it could were Urdu retained as its universal language.

The writer would not for a moment advocate any relaxation in the present efforts to make the British officers learn Urdu. He would continue to enforce the existing tests. In fact, he would welcome the return of the obligatory tests in the regimental dialects, once these dialects could no longer be rivals to the universal language of the army. It is important that British officers should be able to talk to their men in the dialects of the latter. Least of all would the writer throw stones at the Army School of Education Indian Wing for which institution he entertains an unbounded admiration.

BLOCKADE.

BY

A. MILLS.

I.—BLOCKADE AS A DECISIVE WEAPON.

On two occasions during the Great War, the almost complete defeat of the Franco-British armies in the main theatre brought the Allies to the brink of final disaster—once, in August 1914, when the Germans achieved strategic surprise and rolled back the French left wing, and again in the spring of 1918, when Ludendorff's offensives threatened to sweep all before them. But near as the Allies were to losing the war then, there was yet a third occasion, when the danger was more pressing, and defeat, absolute and irretrievable, loomed even closer. This was in April 1917. In that month 423 merchant ships, totalling 849,000 tons, were sunk by enemy submarines and mines. A ship sent to the bottom was then a more serious blow to the Allied cause than a village lost in France. Never in history had the fortunes of the British Empire been more desperate. Had this rate of sinkings continued, Great Britain would have been starving in four or five months, and all effort on the Western Front would have been paralysed long before that. The Allies were saved by the skill and determination of the British Navy and Mercantile Marine, and by divided councils and lack of resolution on the part of their enemies. They were saved—but only by a very narrow margin, and the menace remained until the last months of the war.

In the end it was Germany who lost the war, and lost it, undoubtedly, because her armies were definitely beaten in the field. One has only to read the uncensored diaries and recollections of German soldiers, from generals to privates, to realize how thorough that defeat was. But the German armies were not beaten until the merciless pressure of the Allied blockade, by depriving them of food, munitions, and of the hundred and one things that their opponents had in plenty, had weakened their stamina and broken their morale. Those writers, who had claimed that the British blockade in the Nineteenth Century had contributed more than any other factor to Napoleon's downfall, could point to history repeating itself a hundred years later.

It is no exaggeration to say that the Allied blockade, based originally on the supremacy of the British Navy, was the most decisive weapon of the war, and that, second only to it, was the rival German submarine blockade.

II.—THE TWO TYPES OF MODERN BLOCKADE.

In the Great War there were two distinct types of blockade—

1. The Allied blockade of the Central Powers, and,
2. Germany's blockade of Great Britain.

In object these two blockades were the same ; both were directed to the complete prevention of all supplies reaching the enemy. In method, however, they differed in almost every respect, being alike only in that neither showed an atom more of respect for International Law or for the rights of neutrals than it was compelled to for fear of goading powerful neutrals into siding with its enemies. In practice the United States was the only powerful neutral, and it was in answer to her vigorous protests that the severity of the blockades was varied from time to time by both combatants. At last, when the United States, more enraged by the German blockade than by the British, joined the Allies, all restrictions on both sides vanished.

The Allied Blockade of the Central Powers.

The old conception of a blockade was the Nelsonian one of the storm-battered British squadrons keeping the seas, day in, day out, off the enemy's ports. Modern weapons, submarines, mines, and torpedos, had rendered this close blockade no longer possible. The blockading squadrons lay further out, being aided immeasurably by the geographical position of the British Isles lying dead athwart the German sea routes. But the conception on which the British blockade was based, at the start, was the old one—command of the sea, depending ultimately on a superior Battle Fleet. Cordons were drawn across the German approaches, in the north, from Scotland to Norway, and, in the south, across the Channel. To begin with, in an attempt to keep within the generally accepted provisions of International Law, only ships, whose cargo was consigned to an enemy destination, were intercepted. It was soon found that such a blockade was almost farcical, as ship after ship sailed gaily up the Channel, its cargo nominally consigned to a neutral in a neutral port but really for onward transit to Germany. Gradually, in this and other respects, the blockade was slowly tightened, and the more it was tightened, the more the neutrals protested, and, still, a vast quantity of sea-borne supplies and materials for munitions were reaching the enemy.

To meet these protests, new methods were introduced. In the old days ships had been stopped and searched for contraband at sea, but

the size of modern steamers, the complexity of their cargoes, and the danger of submarine attack, had made such a procedure impossible. Instead, ships were intercepted at sea or diverted from their normal routes by mine-fields and other methods, and sent in for examination to Kirkwall in the north or The Downs in the south. Every ship subjected to this examination suffered a delay, on the average, of four or five days. Not only was this most annoying and expensive for neutrals but, in the case of ships in the service of the Allies, the delay, by increasing the time taken on the voyage, accentuated the already noticeable shortage of shipping. To remedy both these objections a system of permits was introduced, under which vessels belonging to approved neutral shipping combines were given special papers exempting them from search and other inconveniences. Side by side with, and complementary to this, grew up the system which black-listed ships and firms found guilty of attempting to evade the blockade. Such ships were penalized in a variety of ways. They were not allowed to use bunkering, repair, victualling, or deck facilities at any Allied port, denied the use of cables, and refused marine insurance until it was practically impossible for them to trade at all. The hold on neutrals was thus made much more effective, not by agreement with their governments but by the co-operation of the actual owners. This system required a most elaborate and accurate commercial intelligence system, extending, not only to all the ports of the world, but into inland industrial areas. This was symptomatic of the change that was passing over the blockade. From being merely a naval affair it was being transformed into a vast economic and financial organization. The part played by the Navy receded further into the background, but it must never be forgotten that it always remained, and from first to last sea-power was the foundation of the blockade.

When the United States joined Britain in enforcing the blockade, the two nations between them had such a complete control of raw materials and of finance that they could stop enemy supplies at the source, long before they reached the ships. The susceptibilities of the remaining neutrals could be disregarded completely, and they could be 'rationed' with the greatest severity. No neutral country within reach of Germany was allowed to import a ton more of any commodity than it actually needed for its own consumption and all re-export to the Central Powers was at last stopped. This economic blockade far

surpassed any mere naval one in effectiveness ; it was a real stranglehold. The seas were closed, every land frontier was barred by encircling armies, and even the very sources of raw materials were cut off. The rest of the world settled down in grim earnest to starve the besieged Central Powers.

The German Blockade of Great Britain.

The German blockade of Great Britain was quite different from any the world had ever seen. It was based on no surface command of the sea, in fact the Central Powers held such command only in the Baltic and the Marmora. Further, with the exception of a few relatively unimportant and spasmodically employed raiders, it used no surface craft ; nor did it rely on the support of a battle fleet. Its only weapon was the submarine.

Before the war, the chief naval powers had not seriously considered the submarine's potentialities for a large scale attack on merchant shipping. The British sailors, being decent-minded folk, had dismissed the idea as being too barbarous for any nation, while the Germans, whether from similar scruples or not, had also neglected it. As a result, the first six months of the war passed without any serious attacks on Allied merchant shipping and it was not until the end of 1914 that the Germans began to realize what a powerful weapon they held. In February 1915, they started their first campaign against merchant shipping. From then onwards, the history of their blockade is a see-saw struggle between the German admirals, who increasingly realized the possibilities of an unrestricted submarine warfare on shipping, and their statesmen, who foresaw equally clearly the results it would probably have on neutrals. As one or other of these parties gained the upper hand, so the intensity of the submarine blockade waxed and waned. Had either throughout completely controlled the policy it would have been a much more serious matter for the Allies, as either the blockade would have been more effective, or, while less severe, neutrals like the United States would not have been driven into joining the Allies.

An outstanding feature of the submarine blockade, which also distinguished it from all its predecessors in history, was its atrocious brutality in execution. This was inherent in the instrument used and must always accompany it. Wholesale blockade by submarines alone if it is to be effective must be brutal. A surface warship can compel the merchantman to heave to by the threat of firing, and can then send

a prize crew on board or escort him into port. The submarine either cannot, or dare not, do any of these things. If it comes to the surface to order a ship to heave to, it risks a shot from an armed merchantman, or may even find it has tackled a 'Q' ship; surprise is lost and often the intended victim by his speed, darkness or the weather will escape. To a submarine on the surface a boldly handled and efficiently armed merchantman is not too easy a prey. Even if the ship is compelled to heave to, the submarine cannot spare a prize crew, nor can it escort its prize to port through waters where hostile warships may be met. Should it delay sinking the ship to give the crew time to take to the boats, the submarine exposes itself to discovery by hostile patrols. It has, thus, only two alternatives either; it sinks at sight, or it risks its own safety to a probably fatal degree, and at the same time allows its intended victim every chance of escape.

The protests of neutrals at this inherent barbarity led to the practical abandonment in September 1915 of the campaign started the previous February. After this, attacks in waters round the British Isles were only gradually renewed, although maintained unabated in the Mediterranean. When they did again reach serious proportions, early in 1916, the attitude of the United States became so threatening, that in April the German Government, in spite of its naval advisers, ordered its submarine commanders to conform to the recognised rules of humanity and International Law by stopping ships and allowing their crews to take to the boats before sinking. Considering this instruction impracticable and unfair, the German High Admiral, recalled his submarines and confined them to fleet duties. Again the pressure of the sailors prevailed and the warfare against shipping was resumed, but always with restrictions to pacify neutrals. Meanwhile the conflict between the Government and the Admiralty increased in violence, and at last the sailors won outright. Unrestricted submarine warfare was proclaimed from 2nd February, 1917.

Looking back on it, this act seems to have been the last desperate throw of a losing gambler. Germany knew that as a result the United States was almost bound to come in against her, but she hoped that before the immense but unprepared resources of America could be developed on the Western Front, Britain would have collapsed from starvation. Immediately, the number of sinkings rose with a bound; the average for the first six months was 260 ships or 580,000 tons a month. True, the United States did declare war, but, when in April

1917, the losses reached their maximum of over 800,000 tons for the month, it looked as if the German submarine enthusiasts were going to prove right. Such an emergency, as it always does, stung the British into a colossal effort to overcome it. By the end of the year the acuteness of the danger had passed, although in December over 350,000 tons were lost, and throughout 1918 the sinkings averaged a quarter of a million tons a month.

When it is remembered that the Germans never had more than one hundred and fifty submarines in commission at any one time, and of these never more than thirty operating at sea, it is alarming to think what would have happened had they concentrated more and earlier on this weapon. The German submarine, like the British tank, suffered because it was first employed in dribbles, and the priceless advantage of surprise by a sudden mass attack was lost. Had the Germans, instead of indulging in intermittent attacks on commerce, which only infuriated neutrals and warned the British what to expect, and instead of alternately ordering and cancelling the building of submarines, waited until they had them in large numbers and then suddenly loosed them on merchant shipping, the results might have been different. Instead of coming near to winning the war they might have won it.

III.—GREAT BRITAIN AND MODERN DEVELOPMENTS IN BLOCKADE.

Not only did the events of the Great War go far to change the accepted ideas of blockade, but fresh developments since then have been of so far-reaching a kind that they affect the very principles on which British sea-power has been traditionally based. It is of value to consider whether, as a result of these, we may not have to alter our outlook whether as a neutral or a belligerent. But it must be remembered that, however much certain things have changed, there has been no change at all in Britain's two vital needs in war,—defensive, to keep open her sea routes, and, offensive to close those of the enemy.

Surface Command.

One of the most striking events of the Great War was the dramatic suddenness with which the merchant shipping of the Central Powers was swept from the seas. This was followed by a demonstration of the damage to maritime commerce that could be inflicted by a few surface raiders, operating in spite of the undisputed British supremacy. This damage consisted not so much in the ships sunk, as in the

general dislocation to trade caused by shipping being held up in port for fear of capture. Another lesson was the number of light cruisers and other craft it took to run down even one raider.

Clearly if Britain is, as she must to live, to keep open her trade routes, she must have surface command. Incidentally she will then automatically achieve at least a great part of her second object, as she will drive enemy shipping from the seas and control the movement of neutral vessels. To deal with raiders, who will inevitably at times evade the surface command there must be large numbers of light cruisers. They will be required to keep open some 47,000 miles of main sea routes, for it will not be enough, as is sometimes urged, to protect only those by which the British Isles get their food. All routes must be safeguarded or exports to pay for food and munitions will be stopped, and there are not likely to be nations philanthropic enough to supply them free.

Economic Blockade.

The last stages of the Allied blockade were economic rather than naval, and in future the success of any blockade Britain attempts to enforce will depend on the extent to which neutrals can be persuaded or coerced into assisting. In the last war eventually there were no powerful neutrals, but in the next there will probably be several, and they will be able to force such restrictions on the blockade that it will become ineffective. Even the means by which control of neutral shipping was gained are no longer available to the same extent. Coal has been largely replaced by oil as fuel, and Britain does not control the oil supplies as she did the bunkering. Wireless is replacing cables and is beyond control by one nation.

As a result of these factors, a legitimate sea blockade even when backed by a superior fleet is likely to be a less powerful weapon than formerly.

Sea and Land Blockade.

However complete the sea blockade of Germany might have been it would never have succeeded had not her land frontiers also been closed. A hundred years ago even Continental nations could be reduced by a sea blockade, as land communications were few and bad. Now, with high capacity railways and excellent roads, closing the sea routes alone is not enough in any but the most exceptional instances. The land frontiers must be equally barred.

New Weapons.

Using comparatively few submarines Germany came within measurable distance of defeating the greatest sea power the world has ever seen. The extent of her success has demonstrated that any secondary power may hope, if armed with equal unscrupulousness and more resolution, to succeed where she failed. Britain, therefore, to protect herself from literal starvation, must not only hold surface command of the sea routes, but must also discover some method of curtailing the power of the submarine.

Aeroplanes were hardly used at all against merchant shipping in the last war, but they most certainly will in the next. In spite of their obvious limitations they undoubtedly present an increasingly serious menace to routes passing through narrow waters. And there are very few British trade routes that do not pass through narrow waters somewhere within aerial reach of a possible enemy. The aeroplane is a valuable reinforcement to a submarine campaign because the best method of protecting shipping from under-water attack—the convoy system—renders it peculiarly vulnerable to attack from the air. A submarine *and* aerial war on shipping would be a much more serious matter than was the submarine one alone.

Naval Parity with the United States.

The recent unavoidable acceptance of naval parity with the United States is the most important of all the post war changes. Formerly in any war between other maritime states Great Britain, by reason of her unchallengable surface command of the sea, was the most powerful neutral, and she could and did enforce her wishes on the belligerents. Now she will be unable to do so, unless the United States wishes are the same as her own.

If one of the two great sea powers is a belligerent enforcing a blockade, with the other a neutral, there are bound to be continual incidents and protests. In fact it is safe to say that Britain could never enforce a really effective blockade without the co-operation of the United States, any more than the United States without British co-operation.

IV. A POSSIBILITY.

Britain thus faces the future from a position far less advantageous than formerly. As a neutral she will no longer have the immense influence or receive the respect that undisputed command of the sea

conferred on her. As a belligerent, her one great offensive weapon, economic and maritime blockade, is vastly weakened. It can no longer be really effective if she wields it alone; she must have allies on land, and the acquiescence, at least, of the United States at sea. But most serious of all, perhaps, is Britain's increased liability to be blockaded herself in war. Always her greatest danger, this is now, thanks to the new weapons, submarine and aeroplane, that science has placed in the hands of any enemy unscrupulous enough to make unrestricted use of them, a more realisable threat than ever before.

Knowing this, Britain has attempted to secure universal agreement to the abolition of the submarine, but, of course, without success. Historically, it is useless to expect any weapon once used to be abandoned until a better takes its place. Nor could the secondary powers, seeing in the submarine their strongest counter to the naval superiority of Britain, the United States and Japan, be expected lightly to surrender it. Attempts are now being made to limit the numbers and size of submarines, and the more this is done, the more those nations who rely on surface control and on the security of their communications, that is the three chief naval powers, stand to gain. But it seems that they, and the world in general, would gain even more by putting some effective restriction on the use of submarines against merchant shipping. The British Empire and the United States, who as neutrals would suffer most from a submarine blockade of any other power, and would be most likely to be drawn into war by it, and as belligerents stand to lose more than they could gain by it, have every reason to agree to such restriction themselves. And what is much more to the point, they have the power to enforce its observance on the rest of the world.

Amongst the various agreements on naval matters, that have been, or are to be, concluded between Britain and the United States, it should be possible to include something on these lines:—

Both Powers agree that:—

1. When belligerents themselves, they will not use submarines against unarmed merchant ships:
2. If any belligerent nation should use its submarines against the merchant shipping of either of the two Powers, the other will regard such an act as a *casus belli* against that nation so doing.

This will be irrespective of whether the Power whose shipping is so attacked is already a belligerent in the war or not.

An agreement of this kind, while it would appeal equally to the humanitarian instincts and commercial interest of both powers, would afford more security to Britain than to the United States, who do not depend on their merchant shipping for their very existence. It would, therefore, not be unreasonable or impolitic if Britain were prepared, in return for this, to make some concession to America on naval matters about which they at present differ.

In-humane as must be the submarine in its attacks on merchant shipping, the aeroplane cannot be less so. By its nature it, also, is compelled to destroy without warning, and the horrors of an unrestricted aerial blockade would at least equal those of a submarine one. It would be logical and humane, therefore, to include the aeroplane with the submarine in this pact.

No nation would dare face the combined power of the British Empire and the United States; the mere existence of this agreement would be enough to confine the submarine activities of all nations to those of legitimate warfare. Such an agreement would go far to save future generations from the barbarity that disgraced the last war at sea, and would add infinitely to the security of the ships of all nations that trade across the oceans of the world.

A MILITARY MISCELLANY.

By

"HYDERABAD."

Lord Palmerston, who knew a lot about it, gave it as his considered opinion that the only correct manner for the discussion of official affairs was by correspondence. I will, therefore, first place on record a few formal military letters of the past, in the hope that they may prove useful to earnest and serious-minded officers of to-day. The first example is of a

*Request for Promotion.**"Minorca, October 1758.*

(To a Minister)

"MY LORD,

"I was a lieutenant when General Stanhope took Minorca; for which he was made a Lord. I was a lieutenant when General Blakeney lost Minorca; for which he was made a Lord. I am a lieutenant still.

Yours etc.,

....."

It will be recalled that Stanhope took the island in 1708.

Our next example is from the pen of the great Duke of Wellington himself. It should be explained that in commemoration of his victory, he had planted at Strathfieldsaye a fine avenue of beech-trees, which were known as the "Waterloo beeches" and drew admiring visitors from far and near. An accomplished female writer of the day, a Miss Loudoun, addressed to the Duke a formal request for permission to sketch the avenue, to which he returned the following answer, as usual written in his own hand. We may entitle it

Granting a Favour.

"F. M. the Duke of Wellington presents his compliments to the Bishop of London. The Bishop is quite at liberty to make a sketch of the breeches which the Duke wore at Waterloo, if they can be found. But the Duke is not aware that they differed in any way from the breeches which he generally wears."

My next example is culled from that sparkling little book, the Manual of Military Law, and of this letter I regret that I am able to give only an extract, as an illustration of what to avoid.

What to Avoid.

(From Captain Blank, anonymously, to his Commanding Officer.)

“By stopping leave and overworking your officers and men, you make the Regiment a hell upon earth. Your tyrannical conduct is a matter of general remark, and you may rely on it, unless you change, complaints will be made against you at the next General’s inspection.”

Finally, I will quote an old regimental order as a specimen of old-world

Politeness towards Subordinates.

“Orowia, December 3rd, 1813.

Lieutenant-Colonel Quintin requests, that the officers will pay more attention to his orders ; and *not absent themselves from parade without his leave.*”

This was issued to a distinguished cavalry regiment, though not to the same corps which was once bidden in a regimental order to desist from the “unsoldierly practice of throwing herring-guts at the barrack ceilings.”

Some years ago a play was produced in London of which the “big scene” was a court-martial. Somewhat startlingly, the Court was composed of three general officers as judges, with a jury of twelve officers in full regimentals. Sir Hall Caine, in *The White Prophet*, does not go quite so far as this ; but nevertheless his graphic account of a military trial may be of interest to Backward Boys. The trial takes place in Cairo, and the accused-hero is the youngest colonel in the British Army.

“The Judges of the Court entered and took their places. . . . one full Colonel and four Lieutenant-Colonels of mature age, from different British regiments.” (On their appearance a tactless spectator remarks, “They look allright, but white hairs are no proof of wisdom.”)

“Then the accused was called, and amid breathless silence Gordon entered with a firm step. . . . His manner was calm, and though his face was pale almost to pallor” (whatever that may mean) “his expression betrayed neither fear nor bravado. His appearance made a deep impression, and the President asked him to sit.” Then the charges are read—Sir Hall gives them in precise and accurate language, even quoting the appropriate subsections of the Army

Act. The accused refuses to plead, and a plea of not guilty is entered. He also says that he does not wish to be defended by counsel, or to conduct his own defence; so the President asks if there is any officer in court "who wishes to undertake the task of Defender." "In a moment it was plainly evident that the sympathies of Gordon's brother-officers were with him. Twenty men in uniform had leapt to their feet and were holding up their hands." "Lord God, how they love him!" comments a spectator. "The Defender selected was a young Captain of Cavalry, who had brought a brilliant reputation from the Staff College, and in a moment he was in the midst of his duties."

He puts up some brilliant cross-examination, but unfortunately the accused declines to give evidence himself, or to call any witnesses in his defence. After counsel have addressed the Court on the evidence, "the President announced that His Excellency the Sirdar had volunteered to give evidence in proof of the prisoner's honourable record, and that the Court had decided to hear him. The Sirdar was then sworn, and in strong affecting soldierly words, he said that the accused had rendered great services to his country; that he had received many medals and distinctions; that he was as brave a man as ever stood under arms, and one of the young officers who made an old soldier proud to belong to the British army. There is no company more easily moved to tears than a company of soldiers, and when the Sirdar sat down there was not a dry eye in that assembly of brave men."

"After a pause the President announced that the Court would be closed to consider the finding, but in order to assist the Judges in doing so it would be desirable that they should know more of the conditions under which the accused was arrested. Therefore the following persons would be asked to remain: His Excellency the Sirdar, the Commandant of Police, and Captain Hafiz Ahmed of the Egyptian Army." Nobody, it appears, spotted this somewhat astonishing irregularity; and after deliberating for two hours the Court re-opened. "Gordon was told to rise, and the President, obviously affected '(mentally, perhaps?)' proceeded to address him. He might say at once that the Judges regretted to find themselves unable to take account of the moral aspects of the case. Nothing but its military aspects came within their cognisance. That being so, after a lengthy address, the old President concluded by

saying that "it is now my duty, my very painful duty, to pronounce upon you, Charles George Gordon Lord, the full sentence prescribed by military law—death." "Then a thrilling incident occurred. Helena" (Gordon's young lady) "whose head had been down, was seen to rise in her seat, and to raise her thick dark veil. One moment she stood there, back to the wall, with her magnificent pale face all strength and courage, looking steadily across at the prisoner as if nobody else were present in the room. Then, as quietly as she had risen, she sank back to her place."

Within an hour of leaving the Court, Helena was collecting signatures for a petition in her lover's favour—indeed, she obtained the signatures of every officer of the Army of Occupation. Bless her, her efforts bore fruit, for in just a week it was announced that "in consideration of Colonel Lord's distinguished record as a soldier and his unblemished character as a man; out of regard to the obvious purity of his intentions and the undoubted fact that the order he disobeyed had led to irreparable results; remembering the great provocation he had received and not forgetting the valuable services rendered by his father to England and to Egypt, the King had been graciously pleased to grant him a free pardon under the Great Seal!"

It will scarcely be credited that in spite of this, they did not live happily ever after; but such indeed was the deplorable fact.

SOME FURTHER NOTES ON THE TACTICAL HANDLING IN NORMAL WARFARE OF AN INDIAN BATTALION UNDER THE NEW ORGANIZATION.

By

CAPTAIN S. W. BOWER.

"Jat", in his article on the above subject (a), has suggested that the handling of the machine guns will have to receive more consideration in the future than it has done in the past. In this article I desire to enlarge on his ideas, as far as the attack is concerned, and to treat them from a somewhat broader point of view.

On one point only do I desire to disagree with him.

He suggests that the ideal practical machine gun range is 1,000 to 1,500 yards from the immediate objective. I consider that, under normal circumstances, 1,000 yards is the limit and 800 yards about the ideal. This is based on the fact that, in the end, the effectiveness of the fire depends on the powers of observation of the men who control and fire the weapon. They have their eyes close to ground level and, therefore, their vision is very limited.

The power of the defence to bring effective light automatic and rifle fire to bear upon the attacking machine gunners makes an advance to closer quarters undesirable unless cover is particularly good.

To return to the main subject, the problem is to get a reduced number of bayonets home with an increased M. G. fire support.

Let us first examine the nut which we have to crack. The defence in normal warfare does not consist of *lines* but of *localities*. In the rear we have "ground vital to the conduct of the battle", usually areas such as high ground, woods, centres of communications, etc. In front of these areas, and defending them, we have "defended localities" organized on a company or battalion basis. These localities are mutually supporting and therefore two or more must be captured simultaneously if an effective gap is to be made in the defence.

Thus, the defence is a chain, the links of which are the defended localities. The attackers have to discover the weak links, break them and roll the chain up from the break.

(a) "A discussion on the tactical handling in normal warfare of an Indian battalion under the new organization" by "Jat"—April number of the Journal of the U. S. I. (I.).

Sec. 68 (3) (v), F. S. R. II. lays down the frontage for a division in attack as being from 3,200 to 6,000 yards.

The artillery fire support available in an Indian division consists of twenty 18-pdrs., twelve 4.5" How's and sixteen 3.7" How's (b).

Paras. 2 and 3, Sec. 18, A. T. III. make it clear that strictly limited barrages will be the normal form of artillery support except when the enemy dispositions are known in considerable detail. Further, that an 18-pdr. may be expected to deal with a front of 30 yards. In other words, the divisional artillery can support an attack on a *total* front of 600 yards for a *total* period of 44 minutes (c). The word *total* is used in each case to indicate that the barrage fire available will not be continuous either in dimensions or in time. Rather, it will be applied to the areas (defended localities) being dealt with at the moment, and then only for the minimum time necessary. Only by this very strict "economy of force" can we hope to achieve success.

The only conclusion that appears possible from the above notes on the artillery fire support available, is that a division cannot hope to attack at any one time with more than an infantry brigade. Also, that a brigade cannot hope to do more than assault two to four defended localities simultaneously.

Now to consider the tactical handling of the M. G. companies in an infantry brigade. Everyone, I think, agrees that flanking fire is the only support worth having. Overhead fire, be it dangerous or otherwise, is not really effective as it must be lifted when the attackers reach that deadly area, the last few hundred yards.

"Jat" has touched upon the great difficulty which faces a battalion commander when trying to arrange for flanking fire support for his battalion; his guns must nearly always go into another battalion's area and "Who will assist and protect them"? "Jat" has suggested that brigade must indicate some *general lines* on which it is intended to establish forward and supporting guns.

I suggest that this is not definite enough and that it does not overcome our difficulty. The guns of one battalion may possibly be admirably sited to give that battalion support from the flank but

(b) 4-gun btys. One Fd. Bde. of three 18-pdr. and one 4.5"H. bty. One Fd. Bde. of two 18-pdr and 4.5"H. btys.

(c) Bty. echelon only, 176 r. p. g. Rate of fire 4 r. p. g. p. m.

they may, at the same time, be nothing less than obstacles to the progress of the battalion in whose area they are located.

It may be said that things like this can be "adjusted". This all takes time, and wasted time in the attack so often means wasted lives. Our brigade plan of attack should be as "cut and dried" as we can make it from the start. I also object to the word *lines*. It is not definite enough and it does not suggest depth. If a battalion commander is told "Forward M. Gs. will be established on the general line A to B" I consider that he is free to place his M. Gs. anywhere along that line.

That is not the "cut and dried" plan of attack which is our aim. It is unnecessary for me to emphasise the necessity for depth.

I believe that we must look to the cavalry attack for our model; the supporting weapons placed in areas from which they can fire while the sabre squadrons charge as nearly as possible at right angles to the line of fire.

If this is accepted, then our attack will no longer be organized into channels along which the attacking battalions advance, and dotted about which, are the supporting machine guns. Brigade will lay down:—

- (a) areas from which the forward and supporting M. Gs. will support the attack.
- (b) the routes by which the assaulting rifle companies will advance on to their objective.

The M. G. areas will lie outside these routes and, as the success of the assault must depend to a great extent on the effectiveness of the M. G. fire, they must receive first consideration when the allotment of ground is made.

The annexed sketch attempts to shew such an attack in diagrammatic form.

The M. G. companies are practically certain to require assistance in the form of covering parties from the rifle companies. These parties will clear the ground for them and protect them by observation. They may also require artillery support. Smoke would be most useful at this stage.

I agree with "Jat" that the assaulting riflemen should wait until the M. Gs. are in position. It has, however, to be remembered that we do not want the enemy to be able to concentrate all his energies

on the destruction of our M. Gs. while they are getting into position. This danger can be partly neutralized by the covering parties working forward as opportunity occurs, and by suitable artillery support. The movement forward of the covering parties may force the enemy to disclose his dispositions and fire plan somewhat earlier than is now necessary. The more we can learn on this subject before the assaulting troops are launched, the better.

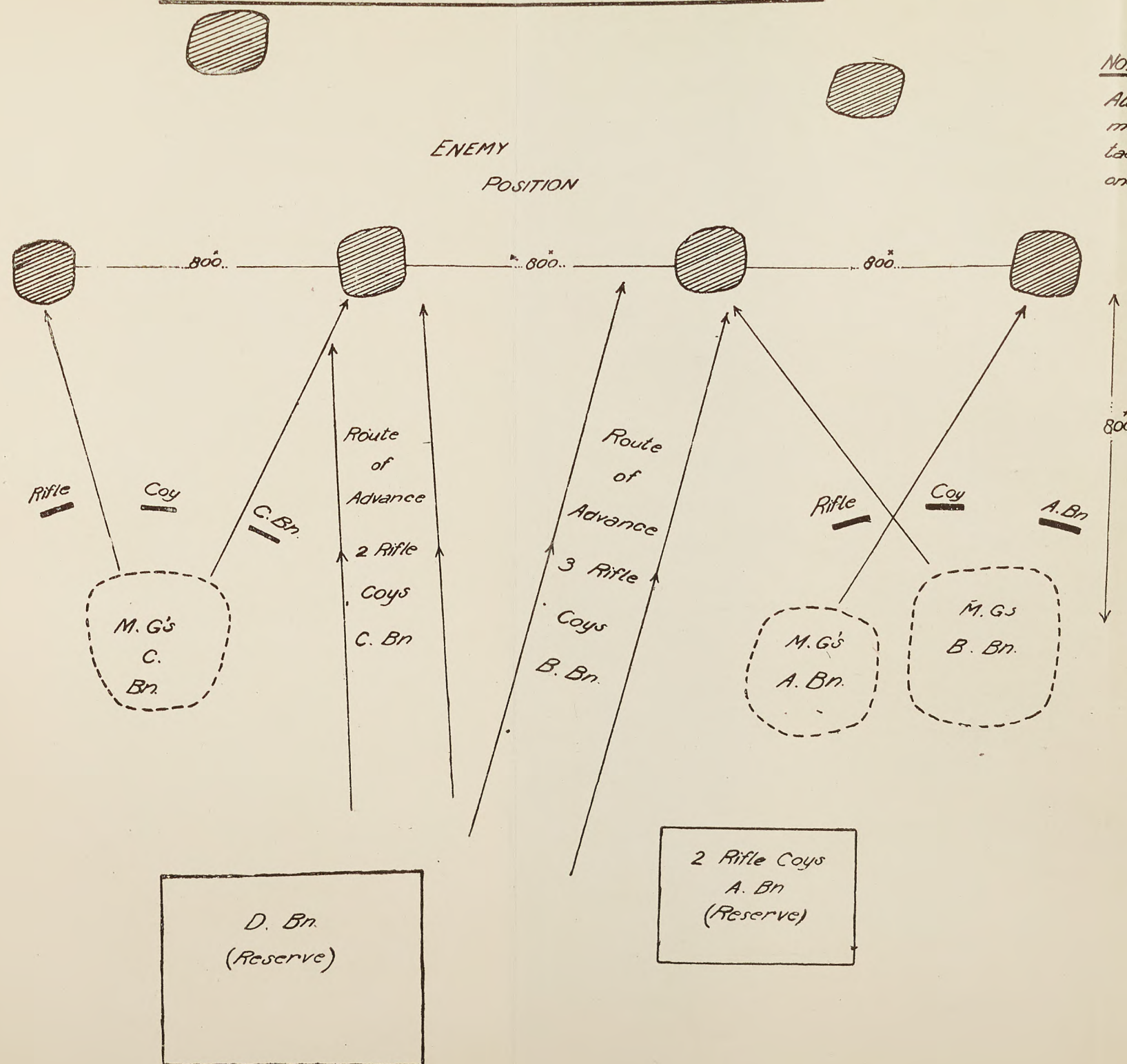
A feature of the plan of attack which I have outlined is that, whether it is viewed from a divisional or a battalion point of view, it is essentially a *brigade* affair.

The division can do little but to co-ordinate and support the brigade attacks, the battalions only execute the plan. As a result of this we see that brigade exercises a very big measure of control over the M. G. companies without actually brigading them. This appears to emphasise the necessity for not only having a senior officer as B. M. G. O., as advocated by "Jat", but also to suggest that he will require a staff. Now a staff is useless without the means of communication. No provision is made for these communications in the brigade signal section nor are battalions likely to be able to spare personnel for this purpose. This line of thought leads to but one conclusion, that the M. Gs. should be organized on a battalion basis.

To summarise my conclusions, in a divisional attack :—

- (i) Only one infantry brigade can be given adequate artillery support at any one time.
- (ii) That brigade can do little more than attack two to four defended localities in any one phase of the attack.
- (iii) The brigade plan of attack should provide for "Machine gun areas" and "Routes of assault", so disposed that the riflemen are given effective support from start to finish.

DIAGRAM-BRIGADE ATTACK, NORMAL WARFARE



NOTE

Allotment of troops is not meant to have any particular tactical value. it is merely one possible solution

KEY

- Enemy defended localities
- Machine Gun areas
- M.G. Line of fire
- Route of advance
- for assaulting Rifle Coys
- Covering Parties found by Rifle Coys

SOME NOTES ON THE INDIAN ORDNANCE FACTORIES.

By

LIEUT.-COL. C. S. TUTE.

In these days of contract budgets and economy campaigns the attention of the army is fixed more closely than ever before on the costs of their supplies—and it may be of interest to many to know something about the Indian Ordnance Factories, the objects for which they are maintained, the methods by which they are financed, and the degree of efficiency with which they are run. It is hoped that the following article will give a general idea on these points :—

1. *Why the factories were established and are maintained.*

As the army has to be maintained and trained through long periods of peace in order to perform their essential duty of fighting in war, so the ordnance factories have to function and be maintained in peace, though their essential function is that of the *Supply of War Stores to the Army in India during War Time.*

This may at first sight appear a truism, but it is a truism of which the full implications are realised by but a few, and it is necessary for the enlightenment of the general reader to indicate a few of these implications.

Implications.—We will take these in the verbal order in which the *raison d'être* of the factories has been stated above :—

- (i) *War stores* are as a class more expensive to manufacture than ordinary commercial articles of common use—this remark is equally true all over the world. The reasons for this higher manufacturing cost are briefly :—
 - (a) The restricted markets, especially in peace time.
 - (b) The complicated designs, involving high accuracy to ensure interchangeability.
 - (c) The very high standard of the specifications and the rigid inspection.
 - (d) The expensive, accurate and to a large extent specialised machinery required.
 - (e) The high grade of supervision and labour necessary

The last two factors entail a ratio of overhead costs* higher than would be necessary in factories dealing with the simple types of manufacture.—

(ii) *Army in India.*—The possibility of having communication with Home cut or made very uncertain, and, at the best, of delayed and erratic supplies due to the Home markets having to supply the demands of the War Office, renders the task of supply during war to the army in India a complicated matter. The Indian ordnance factories must in consequence be prepared to supply many items which would be purely trade supply at Home (*e. g.*, camp kettles) and in order to be ready to supply in war, manufacture must be established in peace. Every effort, however, is made to “establish” manufacture by the trade in India of such articles, but it is a slow and generally expensive business.

(iii) *During war time*—In other words, the ordnance factories are an essential part of that “war insurance” which is the primary function of the army as a whole. This fact entails three main consequences :—

- (a) The plant, buildings and staff of the factories must be equal to producing the *war* requirements of the army, and the maintenance on a war scale of every factor not immediately available at all times.
- (b) As large a labour force as is economically possible must be recruited, trained and maintained in being.
- (c) The (more or less) cheerful acceptance of any additional expenditure involved by (a) and (b) over the normal *peace* maintenance charges, and the regarding thereof in the same light as the cost of the upkeep of the rest of the Army, *i. e.*, an evil, but a necessary evil so long as war is a possibility that must be legislated for.

(As will be seen later on in this article, India may consider herself lucky in regard to this last sub-head.)

2. *Methods of financing.*

(A) Prior to, and during the Great War, the ordnance factories were financed much in the same way as other branches of the army.

* That is, those charges, in addition to the cost of labour and material, which represent those necessary to cover the depreciation costs of buildings and machinery, and the salaries of the administrative, supervising and clerical staffs.

They were given a rough forecast of the volume and nature of manufacture they would be called upon to produce in the ensuing year.

On this a budget estimate was prepared to cover the cost of—

Permanent staff—administrative and supervising.

Labour.

Material.

To these were added any money they had been able to obtain from government for additional buildings or machinery * and such capital grants for new (then termed "schedule") measures as had been decided on. This budget was sanctioned, after the usual cuts, and there the matter, from the point of view of provision of funds, ended. The factories produced what they could or would, and there was no real check of the value of outturn produced against the expenditure incurred. The compiled and costed accounts appeared long after any item had been manufactured and issued, there were no easily available cost accounts of the Home factories with which to make comparisons, and the factories had therefore neither the incentive, nor the necessary means, to scrutinise the cost of their outturn nor to effect economies in manufacturing costs. A controller of military accounts now and again drew attention to a glaring difference between costs in different years, which might or might not be satisfactorily explained, but the army at large "cared for none of these things"—their indifference extending to ignorance of the very existence of the factories themselves, for there were few officers who knew what factories existed or where they were situated.

That the factories were even as efficient as they were was due to no encouragement from without, but to the fact that, speaking generally, the factory officers were a keen and hardworking body, proud of their factories and keen to improve matters so far as it lay in their power to do so.

That the army did not suffer more from lack of adequate supplies was due to the very generous lines on which arsenal "provision" was run, which practically ensured availability of stores (it is true at an unnecessary cost in locked up capital) whether the factories produced a given item ordered from them in the year demanded or in the

* In those days although depreciation on plant and buildings was religiously charged against the cost of outturn, the factories were not credited, as they are now, with a corresponding sum wherewith to maintain themselves in a constant state of efficiency—[See para. 3 B. iii (g) page 476 *infra*.]

next but one. Indeed it was often found possible to cancel an item which had been on order for two or three years, often in considerable quantities, without apparently anyone being any the worse thereby.

(B) *Post-war finance.*

(i) The post-war reorganisation of the factories included a full reconsideration of the methods of :—

- (a) Finance and accountancy for supervision, labour, material, and the cost of the resulting outturn.
- (b) Provision of funds for plant and buildings.
- (c) Watching the efficiency, *i.e.*, the comparative cost and rate of manufacture of output.

The ideal was, and is, to place the *provision* of funds for the factories on a business-like footing, and to ensure as far as possible that the factories justified their existence and *paid for themselves through the value of the services* they rendered.

(ii) The first difficulty to be overcome was the assessment of the value of the services rendered by the factories by some independent, and more or less stable, standard, other than that of what the services actually cost the factories to render. It was realised that we would have such a known and accepted standard in the Priced Vocabulary of Stores (P. V. S.) when this was revised. (The only existing one was a pre-war compilation.)

This revision is still (1929) in progress in England, and its compilation will probably be a matter of another 18 months to 2 years.

In the meantime steady progress has been made with an Indian P. V. S.

These P. V. S. rates are shown alongside the actual manufacturing rate in the compiled accounts of the factories and are also utilized by the D. O. S. for purposes of estimating the value of his maintenance requirements.

(iii) (a) The minimum factory capacity required to give the necessary outturn *in war* was then carefully analysed so far as the data available permitted, and the buildings, plant and staff required was worked out. This *minimum essential war* capacity involved a certain annual expenditure to cover the cost of the staff, and the depreciation

on the plant and buildings, and the next enquiry was with a view to assessing the minimum *peace* load (working only one shift a day) the P. V. S. value of which would absorb these "on costs."

*This figure was found to be—

Rs. 1,70,00,000 for the Ordnance Factories.

Rs. 80,00,000 for the Clothing Factories.

It was not quite a pure coincidence that these figures approximated to the *normal peace maintenance* requirements of the army for warlike stores and repairs thereto (costed at P. V. S. rates) as assessed by the appropriate army and financial authorities, for a certain amount of pruning of staff originally proposed had to be carried out when the peace requirements were ascertained—but the fact that the peace figures were sufficiently close to enable this to be done has enabled the so-called "nil budget" system to be introduced.

(iii) (b) This normal peace figure (1,70,00,000) for the army demands on the ordnance factories is based on estimated prices which will eventually become fixed prices (subject to periodical revision) known as the P. V. S. rates.

At present, as a rough guide towards the fixing of P. V. S. rates we have three sources of costs :—

1. The Home P. V. S. rate *plus* freight and customs.
2. The Home purchase rate from private firms *plus* freight and customs.
3. The manufacturing cost in India (normally the Indian ordnance factories).

The ideal that the Indian ordnance factories have set before them is that they are prepared to supply at whichever of the three

* It must be realised that the cost of any item of manufacture is the sum of the following costs :—

Labour.

Material.

" On costs " which are sub-divided into

Administrative charges.

Permanent supervision charges.

Clerical charges.

Temporary supervision charges.

Power cost charges, etc.

Shop charges.

Depreciation charges.

plus, in the case of commercial concerns, profit to cover interest on capital funds, if any.

rates is the least. The ideal is being largely worked to at present and is the basis of the new P. V. S. rates now being fixed.

The special case of the stores to which the above principle will not apply will be discussed later.

(c) A little reflection will show that it is unreasonable to expect that the army demands should be exactly 1,70,00,000 every year and it is natural to ask what happens when it varies from this mean. The explanation is simple. If the demands fall *below the basic figure*, it is obvious that the residue of those charges, which are permanent and which have not been all absorbed in the cost of manufacture, have to be financed as a separate extra grant from the army funds. If the demand is *above the basic figure* it is equally obvious that the general standing charges are over-absorbed and there is a surplus which is credited to the army in some or all of the following ways :—

The cash allotment for the year is cut down at the beginning ; surplus cash is surrendered during or at the end of the year ; the army is given more goods for their money than the cash credit based on the P. V. S. rates would warrant ; deficiencies in factory stocks of raw material are made up without asking for a cash grant, etc. etc.

(d) It is obvious that there must be certain war stores which, as an essential matter of policy should be produced in India. Speaking broadly, articles that are "mass production" at Home and mass production in India, are cheaper in India. Articles that are made in penny numbers at Home and penny numbers in India are also cheaper in India, it is only for articles that are mass production at Home and have to be made in penny numbers in India that the Home price is markedly the cheaper. It is with this latter class that any difficulty (or criticism) arises and it was proposed that as soon as the rates at which we can obtain from Home had been compared throughout with the rates at which we can manufacture in India, a list of those for which India is more expensive would be prepared.

The army authorities responsible for the efficiency of the army as a fighting force will then have to decide, as regards each of these articles, one of the following three lines of policy :—

- (x) That they must be capable of being made in India and that in consequence the army is prepared to pay the higher price. This higher price will then become the P. V. S. rate of the articles so far as India and the Indian ordnance factories are concerned.

- (y) That the difference in price is too great but the article is a vital essential, and therefore the army must be prepared to maintain an adequate reserve, in spite of the locking up of capital involved.
- (z) That the item is not absolutely vital and that the army is prepared to risk getting it from England or failing that, employing some substitute obtainable in India.

It will be seen from this para that the principles of the *Indian P. V. S.* rate will still pertain to every item that the Indian ordnance factories produce. In probably 90% of cases this rate will be the cheapest rate at which the store can be obtained anywhere and only in the remaining 10% will they be more expensive but being vital items the enhanced cost will be accepted as unavoidable.*

(e) From (x), (y) and (z) above it will be seen that if additional staff is asked for, the factories must normally be able to prove that the increased efficiency obtained thereby will be such as to ensure that the P. V. S. rates are not exceeded and may even possibly be reduced. Any increase in the total cost of staff without definite foreseeable economies to pay therefor, will have practically no chance of consideration. Similarly, additional buildings, if they are to be financed from a new capital grant, have to be most carefully scrutinised with an eye to the fact that every such building means increased depreciation charges and so increased cost of our outturn. Of course, essential buildings, quarters and the like, have got to be provided, but are provided on as low a scale as will efficiently serve the purpose for which they are built.

Similarly all demands for plant and machinery which cannot be legitimately financed from the depreciation grant are most jealously scrutinised. All projects which would have to be financed from capital grant (*i. e.*, involving an increase in the total capital value of the factories) will normally only be justifiable when the Indian ordnance factories are taking on some entirely fresh type of manufacture, *e.g.*, aeroplanes, mechanical transport and the like. Here again, the quantity of staff, buildings and plant that would be asked for would have to be equated to the price that the army can justly be asked to pay for the completed article.

* It should be noted that the price of timber in India approximates to three times the cost of timber in England and it is mainly in stores made entirely or mainly of timber that the Indian costs compare unfavourably with English ones. It should however be realised that English timbers will *not* stand the Indian climate and the employment of Indian timbers is therefore essential, and the cost thereof must be accepted.

The factories therefore have to carefully equate their demands for "*new capital grant*" buildings, staff or plant, to the above factors, i. e., will the recurring cost of the new demands be paid for by the money coming in for the goods we supply ; if not, it is impossible to justify the additional expenditure.

(f) From the above general statement of the case it is obvious that if the factories ask for more plant or buildings or staff than will actually be efficiently employed in turning out the requirements of the army, they are merely loading themselves with either depreciation or recurring staff charges which are not absorbable by the money coming in based on the P. V. S. rates. In the past, it was considered good business to get through a demand for a building which was possibly of a more expensive type or more extensive than was *actually* and absolutely necessary and the factory concerned congratulated itself on its luck. This has now changed. As the factories have to pay in the cost of their outturn for the depreciation of the capital sum expended, every rupee of additional unnecessary cost gives them a smaller margin of safety in working to the nil budget on the basic demand. This principle has been thoroughly impressed on all concerned, and has already resulted in far greater moderation and sanity in demands coming up from individual factories.

(g) The brief footnote on page 471 on the depreciation reserve fund, requires amplifying. All buildings and machinery have always been annually depreciated (on their remaining value) and the equivalent sum added to the working costs of the factories and form a factor in the final price of each item produced.

Formerly however, no equivalent grant was made to the factories to enable them to keep the factories in a constant state of efficiency. The chronic state of "financial stringency" rendered it impossible to obtain annual grants sufficient to efficiently maintain the factories and resulted in a progressive deterioration of the value and efficiency of the capital value of the factories and the spasmodic grants of large sums whenever the position got really serious, or when a really significant change in methods of manufacture was deemed essential. The Home ordnance factories had long enjoyed an annual credit for plant and buildings equivalent in value to the depreciation written off their capital value and absorbed in their manufacturing costs. After considerable difficulty a similar scheme was sanctioned for the Indian

ordnance factories with elaborate rules safeguarding the expenditure of the credits thus afforded. No one, who did not intimately know the Indian ordnance factories before this scheme was sanctioned, can realise the amazing improvement in plant modernisation which it has been possible to effect in the last six years without undue strain on the finances of the country. The improved efficiency which has followed is being, and will be further, reflected in reduction of army reserves, in increasing economy of manufacture and the consequent and progressive dropping in P. V. S. rates which will be rendered possible until the point is reached where the Indian ordnance factories will become the thoroughly modern and efficient establishments that they aim at being.

(h) The position as regards "new demands" is as follows :—

These demands may be for some store entirely new to the army or, as is more usual, when some store replaces another one, *e.g.*, 3·7 inch Howr. in place of 2·75 inch. When these occur, the army budget as a whole gives an initial grant for the first provision. This is known as a "new demand grant." Once the store has been provided, its subsequent maintenance becomes the care of the D. O. S. and finds a place in his maintenance grant (the above 1,70,00,000 at present).

As the cash provision for these new demands is in addition to the D. O. S. maintenance grant, and, as the latter normally absorbs the whole of the overhead charges of the factories, it is obvious that the manufacturing cost of the new demand items can be financed (as opposed to cost accounted) by a smaller sum than would appear from the accounts section figures. It is quite realised that a new manufacture out here will probably in its initial stage be more expensive than the P. V. S. rate. In view however of the foregoing we accept the P. V. S. rates for the financing of these new demands, relying on the fact that the overhead charges have already been absorbed by the D. O. S. maintenance grant and that, therefore, though we apparently lose, we actually do not disturb the balance of the nil budget by accepting the Home P. V. S. rates.

(C) *Possible alterations in future financing.*

(a) The result of the above system though satisfactory from the financial, administrative, and executive points of view, has the drawback that the factories come in for a certain amount of criticism largely based on the apparently heavy cost, vis-a-vis the open market, of certain items of our supply.

In this connection it must once more be emphasised that—

- (i) The factories exist primarily for the supply of war stores.
- (ii) That manufacture of such stores is expensive all over the world and involves a ratio of "on costs" far higher than would be necessary for outturn of a less specialised type.

With the present system of accounts, however, this "war store scale" of on costs is levied on all outturn—and consequently the apparent cost of items, which are also items of trade supply, compares in some cases unfavourably with the market, though the *actual out-of-pocket expenses* to government, i. e., labour, material and direct supervision charges, are far less than the market rate. There is a further and more serious repercussion from this state of affairs, and that is that the apparent high cost dissuades budgetting officers from placing their orders, for items obtainable from the trade, with the ordnance factories. They naturally look to the actual debit that is to be raised against their own grant and place orders with the outside trade when the latter happens to appear cheaper, and do not realise that this action involves :—

The army budget, as a whole, paying more than it need.

Decreasing the load on the factories and so increasing the cost of the balance of the outturn.

Reducing the labour forces employed in the factories and so delaying expansion on the outbreak of war.

Nor do they realize that in many cases the ordnance factory product is of a higher class than the trade supply and would give better service for the price.

(b) The factories being established for an outturn on a war basis of warlike stores, it is only natural that the peace outturn of this specialised nature required from them is below the economic working load of the factories. If therefore, no work outside the specialised type were undertaken there would be a danger in peace of the number of junior supervising staff and workmen being so far reduced as to make rapid and adequate expansion in war time a very difficult matter. In order therefore, to maintain as large a peace labour force as is possible, it is very essential that the Indian ordnance factories shall, in addition to their specialised outturn, undertake as much other outturn as can be given to them within their capacity.

(c) If however the specialised overhead charges were solely allocated to the type of war store outturn, for which the staff and plant have been provided, the cost of the remaining items would be merely the out-of-pocket expenses in producing them. A formula has been arrived at (known as the A. D. formula) which gives the approximate cost to Government of the production of items excluding the permanent (war insurance) on costs, and it is this price that should be compared with the cost on the open market.

It can be said with assurance that in 99 cases in a 100, that this A. D. formula cost is considerably and definitely below the market cost to government. A system of accounting for the factories based on the above is under consideration, and its introduction should clarify the real position as to the factories cost to government of items which might be supplied by the trade, and should lead to practically all army requirements, that the factories can undertake, being made by them.

(d) This system would not increase the costed value of the war type of stores more than $1\frac{1}{2}$ —2%, and as at present* our full manufacturing costs are some 15% lower than the P. V. S. rates for these stores, the additional apparent cost is negligible. On the other hand if the reduction in costed price of trade type outturn leads to a real heavy addition in the load on the ordnance factories, considerable advantages would accrue directly to the factories and also indirectly to the army. Amongst these may be enumerated—

- (a) A large organised labour force, rendering the factories capable of more rapid expansion in war.
- (b) Utilization of much, now practically valueless scrap (especially scrap timber—for ghee boxes, built up packing cases, etc.).
- (c) A small margin of profit, which, with a really heavy load, would tend to make the cost of production of the war stores themselves cheaper by increasing the efficiency and revenue of the factories.

* The total normal value of the outturn of the Ordnance and Clothing Factories is approximately 230 lakhs a year of which 220 lakhs are war type stores and 10 lakhs are of trade type.

3. Efficiency of the Factories.

(a) The main criterion of the efficiency of the factories is the final cost to government of supplies made by them, when compared with the cost that would have been incurred had the factories not existed, and government, in consequence, had to either import its requirements or buy in this country from the trade articles so obtainable.

As has been shown earlier in this article the P. V. S. rates are as far as possible, where data is available, based on these "world prices"—so the performance of the factories vis-a-vis the P. V. S. rates is a fair indication of their manufacturing efficiency. In the last 4 years the factories, *over their total* outturn, have earned increasing "profits" every year. [Broadly speaking the value of services rendered (at P. V. S. rates for new outturn) + or — the fluctuation in value of stocks—the cash expended in the year = the profit made.]

This is mainly due to the increasing efficiency of the factories which is accurately reflected in the increasing profits. Speaking generally, the Indian ordnance factories produce war stores at about 15% cheaper than the Government of India could obtain them elsewhere in the world.

(b) Another criterion is the price that the trade in India is willing to pay for our services when they require them.

It is of interest to note that the trade last year paid us over 2 lakhs for services which cost us (*i.e.*, A. D. formula + 5%) $1\frac{1}{4}$ lakhs, and which with *all* on costs added were cost accounted @ $1\frac{3}{4}$ lakhs.

(c) There may be a good deal of natural curiosity as to where the profits go to. To explain this it is necessary to understand in rather more detail how the factories cash budget is made up. Briefly a financial forecast is drawn up at the beginning of each year in which on the credit side is shown all anticipated sources of revenue in the coming year—

i. e., D. O. S.'s maintenance requirements, costed at P. V. S. rates.

i. e., D. O. S.'s repair requirements cost at an estimated figure.

New demands.

Services for D. of A.

Depreciation reserve grants for plant.

New capital grants, etc., etc.

*The "world price" in the case of imported goods is the cost in the country of manufacture *plus* a percentage to cover freight, insurance, packing and customs.

On the debit side is shown all expenditure on—

Staff.

Workmen.

Stores. $\left\{ \begin{array}{l} \text{Home purchase.} \\ \text{Central purchase.} \\ \text{Local purchase.} \end{array} \right.$

Plant, etc., etc.

If the D. O. S. maintenance grant is over 170 lakhs we *reduce* the initial *cash* credit available at the *beginning* of the year by 4 lakhs for every 10 lakhs of excess—this is a *cash* profit given up to the army direct *and in anticipation*.

By the end of the year, if there is a further profit, this is shown either as—

- (i) increases of stock,
- (ii) cash surrenders to the general pool, *i.e.*, under-spending of the *cash* credit for the year;
- (iii) deliveries of goods to the D. O. S., etc., above the quantities paid for in the financial forecast.

Concluding Remarks.

A few general remarks on manufacture in India and the labour force available may not be out of place.

Labour—

- (i) The labour force has to be roughly divided into skilled, semi-skilled, and unskilled and average rates for each division settled. Jobs then have to be classed as being suitable for one of the three classes, and the rate fixed for the average man of that class.
- (ii) The average Indian workman is illiterate, entirely in English and the majority even in the vernacular. Not 1 per cent. can read a drawing. On the other hand, the “skilled” workman is often a really highly skilled artisan with his tools.
- (iii) The absenteeism is high—the large majority come from the agricultural classes, and try and get away to help with the sowing and reaping of the crops. Religious ceremonies of an obligatory nature are numerous, and enforced “holidays” for religious purposes amount to some 30 a year, exclusive of Sundays,—compare the few bank holidays at Home.

- (iv) In many of the factories workmen are recruited from distances up to 2,000 miles and naturally want periodic leave to their homes ; an English workman recruited to work in Petrograd would do the same. Epidemics of plague, cholera, etc., and seasonal malaria also tend to inefficiency, reduction in stamina and absenteeism.

The above, and other causes, render the Indian workman relatively very inefficient in comparison to the labour obtained in England. This educational, physical and, in some instances, moral inefficiency throws a heavy load on the administrative and supervising staffs and necessitates the recruitment of a high grade of staff. It is of interest to note that the numbers of European supervising staff the Indian factories function with is far lower than are generally employed for a similar number of English workmen at Home.

In order to combat the inefficiency of our labour, the organisation of the Indian factories has to be of a more efficient and detailed character than is deemed necessary in England—and that it is effectual, is proved by the favourable financial costs of our products.

Superintendents of factories in India have far more on their hands than a similar official, managing director, etc., of similar works at Home would have.

Our Superintendents—

- (i) Are often magistrates, and, even if not actual magistrates, have to be conversant with a good deal of law in relation to property as well as the various enactments directly affecting factories.
- (ii) Have to administer large estates, and workmen's villages, including lighting, conservancy, etc.
- (iii) Have to organise technical and general education including apprenticeship schemes.
- (iv) Have to help to organise social services, such as co-operative loan societies, co-operative stores, servants' registration, ice-supplies, etc., etc.
- (v) Have to administer a number of various funds (fine funds, etc.).

INDIAN REGIMENTAL HISTORIES.

By

“HYDERABAD.”

In order to acquaint myself with the antecedents of a certain feature of regimental life in the Indian Army, which it is not necessary to particularise here, it has recently been my lot to go through the very full collection of histories of Indian regiments which is to be found in the library of the United Service Institution at Simla. The first impression of these, as a class, is the impression which remains permanently : I refer to their astonishing unevenness in quality. I have given the matter some thought and venture to offer, for what it is worth, a short discussion of such histories in general, together with a few notes on those works which are the more valuable, whether from the point of view of the general military reader or from the purely regimental aspect, as examples to be emulated.

At the outset, it must be stated that the great majority of Indian regimental histories has been compiled according to a very simple but pernicious recipe. If the unit is a descendant of the Old Bengal Army or the Old Madras Army, the officer “detailed” for the task in seven cases out of ten takes either Cardew’s *History of the Services of the Bengal Native Army* or Wilson’s *History of the Madras Army*, as the case may be ; and blends what he gleans from the book, as a matter of routine, with the manuscript official “Regimental Digest of Services.” The resultant mixture is dished up and dispensed as the “History of the...th Battalion,...th Regiment.” There are many such compilations. They have a certain historical value, almost always very slight indeed, because they have been compiled from sources which though generally accurate are quite insufficient, without any attempt having been made at collation with original orders and documents. Thorough, true research is necessary before a regimental history worthy of the unit can be produced.

The regimental digest of services may be excellent or it may be so scanty as to be almost useless : it may have been started as early as 1830 or as late as 1910. The fact that on such-and-such a date Second Lieutenant A. joined for duty is almost always scrupulously recorded, together with his subsequent promotion, transfer, or death. But such details are of small value, for they are always available from independent printed sources such as Army Lists or General Orders.

It is however the exception rather than the rule to find in the regimental records any full contemporaneous note of such important matters, from the regimental point of view, as the design of the new colours which have lately been given to the battalion (though the name of the general's lady who presented them is nearly always given, together with set speeches full of horrid platitudes); or of the strength of the unit by classes on any given date.

The end to be attained surely demands something very much better in the way of historical method. The problem seems to me to be one of *modus operandi*: the question of historical method must be tackled and mastered before a history worthy of an old and distinguished corps can be completed. I propose therefore to describe briefly some Indian regimental histories which may fairly be regarded as models.

I will take as my texts the following three histories: Colonel L. W. Shakespear's *History of the 2nd K. E. O. Gurkha Rifles*, 1912; Captain A. Frankland's *History of the 101st Grenadiers*, 1928; and Major (now Brigadier General) R. G. Burton's *History of the Hyderabad Contingent*, 1905. For convenience sake these will be referred to hereafter as *Shakespear*, *Frankland*, and *Burton*, respectively. I will first endeavour to analyse these *qua* historical books: to inspect them and to shew to what extent they may be regarded as "standard" in respect of the following essentials: good printing, adequate binding, bibliography, index, illustrations, maps, and (ordinarily) appendices.

The only one of the three which was published by authority is *Burton*, which was printed at the Government of India Press at Calcutta. The other two are printed and published (privately) by Messrs. Gale and Polden, whose works are at Aldershot. *Burton* is well printed and the binding is plain and strong without being severe. My own copy I picked up in the Sudder Bazar at Poona, and it has evidently received hard usage during the last twenty years; but the binding still holds. Messrs. Gale and Polden's publications are always clearly printed (though the founts used are sometimes a little old fashioned or "commercial," perhaps) and their bindings are serviceable and attractive. Often the book is cased in strong cloth of the colour of the regimental facings, with the badge or crest impressed on the front cover in gold or silver. The effect is always good.

"Fancy" bindings, in two or more colours, are sometimes indulged in; but they are expensive and in my experience unsatisfactory since one or other of the colours fades and spoils the effect. The best binding for a regimental history would therefore appear to be cloth (or better still, buckram) of the colour of the facings. When the latter are white, however, the colour of the uniform might be employed instead; and in practice rifle regiments usually adopt rifle green.

The binding of *Shakespeare* is rifle green cloth with a half binding of scarlet leather, and thus it represents both uniform and facings. This is a pre-war book, however, and such a binding to-day would probably be ruled out on the score of expense. As to bibliography and indexes, *Frankland* does not give any separate list of the sources from which his information has been drawn, but since he is scrupulous in giving references in footnotes the omission is but a venial one. There is, of course, no history of the Bombay Army as a whole, a fact which does not tend to alleviate the lot of the historian of a Bombay regiment. The index is a full and useful one. *Shakespeare*, though he does not quote his authorities in footnotes, gives a list of sixteen works of which he has made much use in the compilation of his book. These, though they are not described in very precise terms, certainly include some little-known letters and diaries which might repay investigation by other military historians. But alas! as set-off the book has no index—a fatal omission, and one which is hard to understand in view of the otherwise unexceptionable nature of the work. By the way, some regimental histories prefix, on one of the introductory pages, a list of the successive designations which the regiment has borne, to the great advantage of the casual reader.

Burton, unlike the other two examples, is based on unpublished official records at Bolarum, Madras, etc. In the words of the author, "this history is based entirely on official documents, and where other references have been utilised, such sources of information are specified in the text or notes." In the circumstances a bibliography is hardly called for, but it cannot be too strongly emphasised that the ordinary regimental history should invariably include one. There is an adequate index to *Burton*.

As to illustrations, the 101st Grenadiers' book is remarkably well furnished with them. There are two excellent coloured plates shewing past and present uniforms; a photogravure portrait of the

Colonel of the regiment ; a reproduction of two old prints of Mangalore ; and photographic records of the services of the unit during the war and post-war period. There are also no less than nine useful maps and sketch-maps, which are so folded that they open clear of the text. (This may seem a small point but it is one which is too often disregarded). *Shakespear* boasts as many as 26 maps and pictures, and here too the maps are properly arranged. This book does not run to coloured illustrations : they are of course a rather expensive luxury (the cost of making an octavo block is about Rs. 30 in India, and slightly more at Home), but there is no doubt that they add enormously to the appeal of a book. *Burton*, possibly because it is an official publication, is not quite so lavishly provided with pictures : still, it has a dozen of them, including maps, and the frontispiece is an excellent engraving of the bust of Russell (founder of the Russell Brigade) by the famous Chantrey. (This bust, by the way, is now in the Residency at Hyderabad.)

To the regiment itself, the appendices are often the most important part of its history. The material which can suitably be relegated to them is considerable : for example, the roll of officers, British and Indian, who have served with the regiment from its beginning, a list of the stations the regiment has served at, an account of rewards earned, a transcript of the first muster-roll, biographical notices of officers— the list is a long one. Other appendices often needed are : a list of commanding officers, which both *Shakespear* and *Frankland* give, and to which the latter also adds a list of Adjutants ; a list of officers of other regiments who were attached to the battalion during the Great War ; a description of the Colours (frequently found in British regimental histories, but for some unknown reason hardly ever present in Indian), and of the more interesting mess plate ; a note on the origin of the regimental badges ; a short account—preferably illustrated at least with line sketches—of the uniforms worn by the battalion (avoid long descriptions of sartorial details, they are hard to write and painful to read). *Burton*, which is a history of a collection of regiments rather than of a single unit, has a most valuable appendix summarising “the strength, actual cost, and field services of the Hyderabad Contingent.” Often, too, correspondence which is too lengthy to quote in full in the text can be printed *in extenso* in an appendix.

In conclusion, I would not wish it to be thought that I am unduly critical of any of the three books whose "make-up" I have discussed. On the contrary, I am a great admirer of all three, and in my view they stand head and shoulders above all but about half-a-dozen of the Indian Army histories. I have merely put together the above notes in the hope that they may be found of assistance, however small, to any officer who is contemplating the compilation or revision of his regiment's record. It should be mentioned that the Royal United Service Institution, Whitehall, are only too willing to advise gratis on all matters connected with the compilation and publication of such books; and I believe that many successful histories owe much to their help.

NOTES ON THE ORGANISATION OF TRAINING OF INFANTRY RESERVISTS—INDIAN ARMY.

By

MAJOR E. L. RICKETTS, O.B.E.

Introductory Remarks.

An important post-war reform in the Indian Army has been the re-organization of reserve establishments, revision of terms and conditions of service coupled with a sound system of periodical training.

Adequate and efficient reserves, available on mobilization, are an essential feature of any sound military organization.

These notes are not concerned with the terms of service and organization of infantry reserves, but with their training and the measures that have to be carried out to initiate this training. They are based on the experience gained in training some 750 reservists (three batches) of an I. A. regiment of five active battalions, during one training season.

Suffice it to say, that normally, an Indian infantry soldier serves for seven years with the colours, and 8 years with the reserve. Three years reserve service is spent in class A, which entails one month's annual training, and five years in class B, one month's biennial training.

Training Centres.—The reserves of an I. A. regiment are trained at the training battalion which is the reserve training centre. All records are maintained and kits stored at the training battalion. Active battalions of regiments, for whose direct benefit reserves are maintained, rarely come in contact with this important branch of training.

Owing to climatic, harvest time, and similar factors, reserves are normally called up for training during November—February, which coincides with the collective training period in India.

The training staff has to be provided by the active battalions. In consequence, there is a tendency in active battalions to look upon reservists training with disfavour. The loss of trained section leaders is naturally felt at this period.

Company commanders grudge the services of efficient instructors but lose sight of the fact that well trained reserves will be invaluable to them on mobilization.

The need to stress the importance of reservists training is evident.

Action by Commandant, Training Battalion, prior to annual training.

The commandant, training battalion, is O. C. reservists of a regiment (T. B. Manual 1924, para. 71.) Before training can commence much has to be done as regards organization and administration.

The commandant T. B. will :—

(a) Fix the training period with sanction of G. O. C.-in-C., Command and decide on the number of batches for annual or biennial training. The factors that have to be taken into consideration are :—

- (i) The convenience of the men. Harvest time and sowing seasons will be avoided.
- (ii) The convenience of active battalions as to when training staff can be spared with the least interruption to training.
- (iii) Climatic conditions.
- (iv) Available range accommodation.

This is the limiting factor as to the size of each batch.

(b) Fix establishment of administrative training staff and quota from each active battalion. Normally, demands are made on all battalions equally, but units in Waziristan, outposts in the Kurram and Baluchistan, and overseas cannot be called upon without the concurrence of the command headquarters concerned.

(c) Fix details of equipment required on loan from active battalions—Vickers, Lewis guns, and signalling.

(d) Indent for rifles, equipment, tentage, extra-issue blankets (in consultation with medical officer) to be drawn from arsenals.

(e) Arrange with Military Engineer Services, medical and cantonment authorities for the provision of cook-houses, latrines, wash-houses, drinking water supply, and conservancy.

(f) Arrange for temporary enrolment of followers—cooks, bhistis and sweepers.

(g) Issue calling up notices. These should be sent to reach men at least two months before joining date. If two or more batches are being called up, an interval of at least a week should be arranged between the first and second to give the instructors a break.

The instructions contained in the Training Battalion Manual have temporarily been superseded by the issue of A. H. Q. No. A/45055/2 (A. G. 2), dated 5th October 1927.

All the above arrangements will be based on these revised instructions.

Action by Officer in charge Reservists Training, on joining T. B. prior to commencement of training.

The training and administrative staff, with equipment from active battalions, should join at the T. B. one week prior to the arrival of the first batch.

The officer in charge reservists training, will have to get busy without delay and :—

(a) Organize training and compile detailed programmes.

This is his first important task.

His data is contained in appendices 6 and 7 of the T. B. Manual amplified by the various syllabuses issued with A. H. Q. No. A/45055/2 (A. G. 2), dated 5th October 1927. The writer found it necessary to compile five different training programmes to fulfil requirements.

Programme A—Class A Reservists.

Programme B—Class B Reservists.

Programme C—Lewis gun training, class A and B.

Programme D—Vickers gun training.

Programme E—Signalling training.

These programmes require great care and thought in compilation.

The training must be intensive and progressive. At the same time undue physical strain must be avoided. It must be remembered that in the early stages the men will be “soft” from the military standpoint after one or two years absence.

Recreational training should be included.

(b) Organize platoons, and distribute instructional staff. Platoons can be organized on a caste or battalion basis.

As reserves are regimental and not earmarked for particular battalions, the caste platoon organization was found to be the best for training and administration.

(c) Establish reservists standing camp—if barracks or hutments are not available.

(d) Compile camp standing orders, orders for guards and sentries, organize police and sanitary arrangements.

Reception of Reservists.—The normal strength of a reservists training batch is approximately 250.

The reception of these details, issue of kits, etc., and medical inspection calls for careful organization to avoid delay in time that should be devoted to training.

It is suggested that a time table of action prior to start of training should be prepared. The time table appended to these notes was found suitable.

The training period.

Four weeks of six full working days per week is the allotted period. From a scrutiny of the syllabuses already referred to, it will be realised that a big task has to be completed in a limited time.

The general consensus of opinion in the army is that the Indian soldier deteriorates rapidly on transfer to the reserve and forgets most of his work.

This was undoubtedly true of the pre-war reservists.

The writer's experience was, however, that the deterioration was not nearly so marked as he had supposed it would be.

With sympathetic and patient handling and strict discipline it was found that the majority of men responded well and carried out their work with keenness and energy.

The standard of efficiency attained was good.

Paragraph 93, T. B. Manual, gives a clear idea of the objects to be attained and is a helpful guide.

In practise it was found that the most suitable distribution of the various branches of training was :—

1st week.—Individual training—physical training, squad drill (with and without arms), rifle exercises, guard duties, care of arms. V. T., and J. D., bayonet training (early lessons).

Object.—Smarten up the brain and body.

2nd week.—Physical training, preliminary weapon training, standard tests, ceremonial, platoon and company drill, field signals, battle drill.

Object.—To bring back skill in handling and use of weapons. Improve standard of discipline, and obedience of orders for tactical purposes.

3rd week.—Range practises—minor tactical training as time permits.

Object.—Test skill in handling weapons.

4th week.—Marches and elementary tactical exercises.

Object.—March discipline, test physical fitness. Refresh tactical training and bring up-to-date.

Throughout the period it was found advisable to devote two afternoons a week to recreational training—hockey, wrestling, tug-of-war—athletics.

This is the best way to guard against those bugbears of training—monotony and staleness.

Prior to the dispersal of each batch, a day should be devoted to sports—wrestling and tug-of-war competitions. It gives an enjoyable finish to an intensive period of training and creates a good atmosphere for the next time the men will be called up.

Specialist training.—The syllabus of work is laid down in A. H. Q. instructions and does not call for comment. The officer in charge reservists training should invoke the aid of the brigade (or district) machine gun and signalling officer to assist in the framing of programmes and inspections. Training battalions do not have these officers.

Instructional staff.—Lectures to, and co-ordination of methods of instruction among the instructional staff form an important part of the work of the officer in charge reservists training. Normally this staff has to instruct three batches of reservists consecutively, and staleness must be guarded against. The officer in charge training should arrange a short training cadre class during the break between batches, with the object of co-ordinating instructional methods and eradicating any errors that have been observed in the initial training period.

The training of subsequent batches will benefit if this can be adopted.

Administration.—Successful training is dependent on good administrative arrangements, and the enumeration of these is not out of place in these notes.

The following should be arranged :—

- (a) Boards on rifles, equipment, stores, etc. on loan from units and arsenal *prior to and after* training. This will safeguard all concerned against criticism and possible financial responsibility as regards *condition* of articles when returned.
- (b) Check of all records, sheet and next-of-kin rolls. This is irksome but very necessary in the interests of the men.
- (c) Periodical medical inspection during training. The elimination of physically unfit men is desirable to maintain a good standard in the reserve.

- (d) Initial kit inspection prior to training. This should be very thorough. Replacement of unserviceable articles can only be effected from kits of discharged reservists, (A. I. [I.] No. 1 of 1924, para. 6).

Dispersal arrangements.—The reverse procedure to that adopted for the reception of the batches with a similarly timed programme is suitable.

The kits, after final kit inspection, should have a packing note inserted and the kit bags sealed in the presence of an officer.

Railway authorities should be warned three or four days in advance of the numbers for whom accommodation will be required.

Conclusion.—The foregoing notes will indicate the amount of administrative and training work necessary to ensure a successful reservists training season.

It should provide invaluable experience for regimental officers and N. C. O's.

If the training is made interesting, the limitations of the men concerned are realised and shortcomings dealt with sympathetically, the results attained will fully repay the time and labour expended.

The aim should be to send the men back refreshed in their military knowledge, physically fit, and thoroughly contented so that loyalty to the Crown and *esprit de corps* ingrained during the colour service remains unshaken.

Appendix to Notes on training of Infantry Reservists, I. A.

Time-table of action prior to start of Reservists Training.

Day.	Time.	Detail.	Remarks.
Zero.	..	Issue of two extra issue blankets and one ground sheet to each reservist on arrival.	Zero day is the day reservists are ordered to report.
Zero+1	0700 hrs. 0730 hrs. 1000 hrs. 1500 hrs.	Issue of kit bags. Medical inspection. Issue of equipment. Issue of rifles, bayonets and scabbards.	.. By platoons.
Zero+2	0730 hrs.	Kit inspection.	.. Unserviceable articles to be replaced as far as possible from kits of discharged reservists. (See A. I. [I.] No. 1 of 1924. para. 6).

SOME NOTES ON THE NEW MANUAL OF MILITARY LAW.

By

“ ANONYMOUS. ”

Memorandum.

The lapse of 14 years since the publication of the last edition of the Manual of Military Law—a period which included the Great War—has rendered necessary considerable amendments of, additions to and alterations in the text of the new edition. It should also be remembered that during the past 14 years there have been important amendments effected in the various Army (Annual) Acts and the Rules of Procedure have been revised; these have required additional explanatory notes. The publication in 1921 of the Air Force Manual provided much important material which was applicable in all respects to Army conditions and the new Manual of Military Law will be found to contain many verbatim extracts therefrom.

It is thought that a general resumé of the main alterations introduced into the new (7th) edition will be of service. It is impossible to draw attention to all the changes effected; changes of importance, therefore, are alone noted in this memorandum.

Chapter I.

Paragraphs 2 and 3 explaining the legal position of officers and soldiers and the nature and purpose of military law contain much new material.

Paragraph 7 dealing with ‘ martial law ’ presents this subject in an up-to-date form; much of the old material remains but it is put together in a better shape.

Chapter II.

Except for some minor alterations in the text and notes this chapter has not been changed.

Chapter III.

This chapter has been expanded from 38 to 66 paragraphs. In the old manual only a very few of the most important and commonly committed offences received adequate notice and it was considered

eminently desirable that mention should be made of other important offences which, with some frequency, become the subject of trial by court-martial. For the first time therefore there have been introduced into this chapter paragraphs dealing with (1) offences of violence (paragraphs 8 and 9); (2) offences under section 10 (paragraph 15); (3) 'disobedience of written orders' (paragraph 16); (4) offences under sections 12 and 14 relating to 'desertion' (paragraph 25); (5) 'fraudulent enlistment' (paragraph 27); (6) offences connected with 'absence' (paragraph 28).

The old manual made little or no reference in Chapter III to offences of 'disgraceful conduct' (sections 16—18). These are now fully dealt with in paragraphs 29—41 and it will be noted that a full explanation is given in paragraphs 30—36 of the technicalities connected with the offences of 'stealing,' 'embezzlement,' 'fraudulent misapplication' and 'receiving' under sections 17 and 18. In paragraph 40 instances are given of 'offences of a fraudulent nature' under section 18 (5): paragraph 41 dealing with 'malingering', etc., is new.

Paragraphs 49—59 are all new; sections 20—39 of the Act were not mentioned in the text of the old manual. Paragraphs 51 and 52 should be specially noted.

'Punishments' has been made into a prominent cross-heading. The last part of paragraph 62 is new, as is also the whole of paragraph 63, dealing with 'combined punishments.'

Some slight but important additions have been made in connection with 'disobedience' and 'lawful commands' (paragraphs 10—14).

Lastly it will be seen that, by means of foot notes, attention is directed to specimen charges illustrating all the important offences. The number of specimen charges inserted in the manual has been considerably increased.

Chapter IV.

There are minor additions to the portion of this chapter dealing with 'arrest' due in most cases to changes in the King's Regulations. The first part of paragraph 11 and the last sentence of paragraph 15 should be noted.

There are few changes in the section dealing with 'investigation.' The second part of paragraph 26 is new, as is also the second part of

paragraph 27. The last three lines of paragraph 29 have been inserted for the first time.

The third section dealing with the summary powers of a commanding officer contains a few necessary amendments consequent upon changes in the Act. Paragraph 33 dealing with 'absence without leave' and the second portion of the first part of paragraph 34 dealing with 'forfeiture of pay' are new.

The fourth section is, of course, new and deals with 'summary awards under section 47.'

The sixth section, so far as paragraphs 41 and 42 are concerned, is new and is due to amendments of the Act.

Chapter V.

This chapter has been entirely re-written with the object of setting out in chronological order all the necessary and many of the possible incidents which arise at a court-martial from the time it is convened until execution of sentence. The introduction of cross-headings marking the various stages of the trial should be found of much value. The references in the footnotes have been enlarged and much material has been added to the text for the purpose of introducing points of practice and rulings on procedure which have been decided in recent years. The number of paragraphs has been enlarged from 103 to 113. The following paragraphs in particular should be noted: paragraphs 25—27 ('preparation of defence'); paragraph 97 ('powers of confirming authority'); paragraphs 100—102 ('setting aside conviction' etc.).

It should be added that very many of the alterations effected are due to the coming into operation of the revised Rules of Procedure in 1926.

Chapter VI.

The old chapter VI has been described by experts as the best short treatise in existence dealing with the law of evidence. But since it was written there have been many decisions of the Court of Criminal Appeal which govern the law of evidence as affecting both Civil Courts and Courts-Martial and these have, therefore, been incorporated in the text and footnotes.

Some of the more important additions are as follows :—paragraphs 13 and 14 relating to the question of ‘burden of proof’; paragraph 19 (first part) dealing with the effect of ‘evidence of good character’; paragraphs 20, 21, 23 and 24 in which the admissibility of evidence of ‘similar acts’ or in proof of ‘design’, ‘course of conduct’, etc., is discussed and the most recent legal decisions are quoted.

Proof of the receipt of letters sent through the post is the subject of a new paragraph (36).

The present law as to ‘corroboration’ is dealt with in paragraph 45.

Practically the whole of paragraph 48 relating to ‘hearsay’ is new, as is also the second part of paragraph 49 concerning ‘dying declarations.’

‘*Res gestae*’ is more fully dealt with in paragraph 52 and the admissibility in evidence of ‘complaints by young persons’ is mentioned in the second part of paragraph 53.

The last two sentences of paragraph 67 (‘handwriting experts’) is new.

Paragraphs 72—83 dealing with ‘admissions and confessions’ require careful study; several important additions have been made to the earlier paragraphs. The rules drafted by the judges as to questions by police officers which appeared in the Air Force Manual have been incorporated and paragraph 79 dealing with statements obtained unfairly is new.

There are important additions to section (VI) (‘who may give evidence’). The question of ‘turning King’s Evidence’ is introduced at the end of paragraph 85; paragraphs 88 and 90 on the subject of the evidence of lunatics and children respectively are new.

The need for warning a witness that he need not incriminate himself is introduced into the manual for the first time (paragraph 95).

Finally, the questioning of accused persons by the court is dealt with in paragraph 120: this is new.

Chapter VII.

There is much new material in this chapter on ‘civil offences’ but the text has been cut down in other respects by the omission of paragraphs relating to coinage offences, ‘procuration,’ etc., which would rarely in practice come before ‘courts-martial.

Paragraph 8 contains the substance of a recent amendment of the Act relating to insanity, while paragraph 9 which deals with 'drunkenness' and 'intent' is new.

'Aiding and abetting' is more clearly explained in paragraph 16 and 'common intent' in paragraph 17.

There is new matter in paragraphs 20 and 21 relating to 'accessories'; a new sentence dealing with the special finding of an 'attempt to commit crime' will be found in paragraph 22 and with 'intention' in paragraph 23. Paragraph 24 relative to 'motive' is new.

There is much that is new in section (V) (assaults and sexual offences). 'Assault' is defined in paragraph 34; the defence of 'consent' mentioned in paragraph 36. The last few sentences of paragraph 37 (rape) are new; the defence of 'reasonable cause to believe a girl to be over 16' is dealt with in paragraph 38. 'Sodomy' is more fully explained in paragraph 39. Paragraph 41 is new.

The paragraphs concerning 'justifiable and excusable homicide' (43 and 44) are almost entirely new and there is a very important new sentence in paragraph 46 dealing with 'manslaughter by negligence'.

None of the changes effected in the new manual are more drastic than in connection with 'theft and cognate offences' (paragraphs 50—67). In these paragraphs will be found entirely new material explaining all forms of stealing *e. g.*, by a trick, by finding and by bailee. 'Embezzlement' as a civil offence is carefully described and paragraph 56 relating to 'fraudulent conversion' is new. There are two new and important paragraphs connected with 'false pretences'. 'Robbery' 'demanding with menaces' 'burglary' 'house-breaking' 'stealing in a dwelling house' and 'receiving' are fully explained for the first time.

The new paragraph 66 relating to the doctrine of 'recent possession' is important. Practically the whole of the text in paragraphs 68, 69 and 71 relating to 'forgery' is new, while there is new matter incorporated in paragraph 72 ('perjury'). The description of 'arson' is new (paragraph 75); the paragraph (77) relating to 'bigamy' has been enlarged and most of paragraph 79 ('conspiracy') is new.

Finally, the form of the Table of Offences at the end of the chapter has been altered by the addition of a column showing other offences of which an accused person may under section 56 (6) of the Army Act be found guilty where he is charged with certain offences.

Chapter VIII.

This chapter has been pruned down from 99 to 62 paragraphs; much of the material in the text of the old manual was no longer required. The chapter itself has been re-arranged and room has been made for the post-war decisions in the Irish Habeas Corpus, etc. cases (see paragraphs 14, 28 and 29) and in various other civil cases and, in particular, *Heddon v. Evans*.

Chapter IX.

Except that this chapter has been brought up-to-date (see especially paragraphs 48—55, 69—73, 125, 133, etc., 158) there are few alterations in it. The paragraphs are increased from 136 to 164.

Chapter X.

This chapter, subject to a few textual alterations and necessary amendments to bring it up-to-date, remains much as before.

Chapter XI.

There has been much re-arrangement here and the constitution of the military forces as now described is up-to-date.

Chapter XII.

There are few alterations in this chapter.

Chapter XIII.

This has been carefully re-edited in the light of recent legislation and judicial decisions, and the whole has been approved by the Law Officers of the Crown.

Chapter XIV.

Some new paragraphs have been added (*e. g.*, paragraphs 12—14) but there is little change in the text. The additional footnotes referring to the Great War will be found of interest and Appendix 17 (pages 402—411) comprises the terms of the Armistice with Germany, 11th November 1918.

Footnotes to the Army Act.

The more important alterations, additions etc. to the footnotes will now be noted in sequence.

- Section 4. Note 7 is new.
- „ 5 Notes 1 and 2 contain new or re-arranged matter.
- „ 6 Note 14. The sentence relating to the appointment of provost-marshals is new.
- „ 8 Note 1 is new.
 Note 2. The last sentence of the first paragraph has been added.
- „ 9 Note 1. The last sentence as to 'religious scruples' has been amended.
 Note 3. The instances of lawful and unlawful commands have been incorporated from the Air Force Manual.
 Notes 4 and 5. Are new.
 Note 7. The last sentence is new.
- „ 10 Note 3. The third sentence is new.
- „ 11 Note. Directions as to the necessary proof of posting etc. of 'orders' have been inserted.
- „ 12 Note 1. Most of the earlier paragraphs are new.
 There is a very important paragraph dealing with desertion 'when under orders' etc.
- „ 13 Note 5. The question of a 'free kit of necessaries' is dealt with.
- „ 15 Note 1. There is much new material in the last few paragraphs dealing with specific points not infrequently arising in cases of absence without leave e. g. 'orders to rejoin unit', 'loss of return railway ticket', 'non-receipt of orders to rejoin' etc.
 Note 2. Onus of proof is referred to here.
 Note 3. The latest rulings as to proof of charges of 'failing to appear at the place of parade' are incorporated.
- „ 16 Note. The last three paragraphs are new.
- „ 17 Note. Decisions as to 'bank notes', 'postal orders', 'property of the N. A. A. F. I.' have been inserted.

Section. 18. Note 2. The definition of 'malingering' has been widened.

Note 3. The definition of 'feigning' is new.

Note 5. The definition of 'producing disease' etc. has been enlarged and the question of inoculation, vaccination, anæsthetics etc. is introduced.

Note 12. The examples of fraudulent offences are given for the first time.

Note 14. The last sentence as to Judge-Advocates is almost entirely new.

„ 19, Note 2. Is new.

„ 22. Notes 2 and 3. Much of this is new.

„ 24. Note 6. The last sentence is new.

„ 29. Notes 1 and 2. There is new matter and some re-arrangement.

„ 40. Note. Nearly the whole of this is new and the instances given of charges under this section will be of value.

„ 42. Note. There are large additions here.

„ 44. Notes generally. Nine-tenths of the matter is new.
Notes 5, 6, 7, 9, 14, 15, 19, 22 and 27 should be specially noted.

„ 45. Note 1. A new sentence in the middle deals with the right of a person in custody to know what are the charges against him.

Note 2. Is new and important.

Note 6. Is new.

„ 46. Notes generally. Very much of the material here is new and much has been re-arranged. Notes 2, 3, 4 (2nd and 4th paragraphs), 5, (part of) 6, 9, 12, 15, 17 and 18 should be specially noted.

„ 47. Notes generally. These are naturally new in their entirety.

„ 48. Notes 3, 7, 8 and 9. Are mainly new.

„ 54. Notes 3 and 4. More fully explain 'revision'.

„ 56. Note 3. Is new and important.

Section 57.	Note 6.	There are important additions here in the last two paragraphs.
	Note 7.	Is new.
„ 57A.	Notes generally.	These are materially new.
„ 58.	Note 1.	Is new.
„ 59—68.	Notes generally.	The re-arrangement of the prison, etc., sections of the Act has caused a re-shuffling of former notes and, to some extent, the introduction of new ones.
„ 72.	Notes generally.	There is much new material in connection with Courts of Inquiry
„ 75.	Note 4.	Is new.
„ 76.	Notes 2—5.	Are new.
„ 79.	Notes 1, 3, 5 and 6.	Are new.
	Note 4.	Has been amended and added to.
„ 82.	Note 2.	The last sentence of the third paragraph has been added.
„ 84.	Note 2.	Is new.
„ 85.	Note 4.	Is new.
„ 90.	Note 2.	Is new.
„ 92.	Note 4.	Is new.
„ 95.	Note 2.	The last sentence is new.
„ 99.	Note 4.	The first paragraph is new.
„ 100.	Note 1.	Is almost all new.
„ 103.	Notes 2, 3, 4 and 6.	Are new.
„ 108.	Notes 1 and 2.	Are new.
„ 108A.	Notes generally.	Much of the material is naturally new.
„ 112.	Note 4.	Is new.
„ 113.	Notes generally.	These are all new.
„ 115.	Notes 2, 4, 6 and 8.	Are new.
„ 122.	Note 2.	The position with regard to the Lord Lieutenant of Ireland is explained.
„ 123.	Note 2.	The addendum in the second sentence deals with an important matter.
	Notes 3 and 4.	Are new.
„ 127.	Note 2.	Is new.
„ 130.	Note 3.	Relating to insanity is new.
„ 133.	Notes 1 and 2.	Are new.

- Section 137.** Notes 2—5. These are important additions on the subject of penal deductions from pay.
- „ 138. Notes generally. There is a large amount of new material here. Notes 2, 4, 6, 9, 12, 18 and the last part of 23 require to be noted.
- „ 141. Notes generally. These are all new.
- „ 145. Notes generally. With the exception of notes 2 and 4 these are new.
- „ 154. Notes generally. Practically all of these are new or have been re-drafted and revised.
- „ 157. Note The whole of this has been re-written and added to; there is very important new material in it.
- „ 158. Notes 1 and 3. Are entirely new.
Note 2. Has been amended.
- „ 161. Note 1. The second sentence is newly added and is important.
Note 6. Is new.
- „ 162. Note 1. There are important additions here.
- „ 163. Notes generally. There are considerable additions and amendments here. The penultimate paragraph of note 1 is new as are also notes 3, 4, 5 and 7—16.
It will be noted that the *pro forma* of a certificate of surrender has been included in note 15.
- „ 175. Note 5. There is new material here.
- „ 176. Notes 6, 9 and 10. Are new.
- „ 178. Notes 1 and 2. Are new.
- „ 179A. Notes generally. These are necessarily new.
- „ 180. Notes 3 and 4. Additions have been made.
- „ 182. Notes 1—3. Much of this is new.
- „ 183. Note 9. Is new.
- „ 184A. Notes generally. These are necessarily new.

The recent revision of the Rules of Procedure has necessitated the incorporation of much new material into the notes which does not, of course, appear in the Air Force Manual; the Air Force Rules of Procedure not having as yet been altered.

Only the main alterations, additions, etc., are indicated below ; many of the notes have been re-written.

- Rule 4.* Practically the whole of notes 7—13 are new.
- Rule 8.* In note 2 reference is made to the investigation by the C. O. of a charge against an officer.
- Rule 9.* There are not many notes to this new rule as the notes to section 47 adequately deal with the matter.
- Rule 13.* In notes 2 and 3 are new illustrations of charges which disclose two offences. In note 4 is an illustration of a case where the particulars of a charge do not support the statement of the offence.
- Rule 15.* Note 4 as to procuring attendance of witnesses is new.
- Rule 16.* Contains addenda of importance relating to the prohibition of a C. O. from convening a court-martial for the trial of a soldier under his command ; submission of certain cases to J. A. G. before trial ; the opinion of the convening officer as to the composition of the court in certain respects ; the necessity of a separate copy of the convening order for every case tried.
- Rule 18.* Note 1 is largely new and deals with the question of detailing to serve as members of the court a number of officers in excess of the legal minimum.
- Rule 22.* Note 3 is new and is a reversion to the pre-war practice. During the War an officer senior but not junior in rank to the officer detailed was allowed to sit. The importance of the signature of the convening order is stressed in note 4.
- Rule 23.* The first two instances of lack of jurisdiction given in note 3 are new.
- Rule 25.* Note 6 and the second paragraph of note 7 are new.
- Rule 26.* It is here stated for the first time that persons taking the oath need not kiss the book.
- Rule 27.* The right of accused to object to shorthand writer etc. is emphasised.
- Rule 30.* Most of note 1 has been re-written.
- Rule 31.* The description of 'arraignment' (in note 1) is new, as is also the whole of note 2.
- Rule 32.* The instance in note 1 of a charge which does not disclose an offence is new.

- Rule 34.** The meaning of recording a special decision upon a plea to the jurisdiction is illustrated in note 5.
- Rule 35.** Has a new example of a plea of 'guilty' under a misapprehension (note 3). In note 5 it is now made clear that a special finding cannot be recorded on a plea of guilty (note 5). Notes 6 and 7 are new notes explaining two of the Rules of Procedure added in 1926.
- Rule 36.** The illustration of a plea in bar at the top of page 640 is new, while note 2 as to 'condonation' etc. has been added. Note 6 is important.
- Rule 37.** Note 2 as to alternative charges is new. For the first time 5 examples of statements etc. inconsistent with plea of guilty have been included (see note 6).
- Rule 39.** There is much important new material here; *e.g.* grounds for adjournment of trial after plea (note 1); prosecutor's 'opening' address (note 3); duty of prosecutor to 'conduct' his case (note 4); necessity for a witness who is to be called at several trials to be sworn at each of them (note 4); attachment to proceedings of copies of documents (note 5).
- Rule 40.** There are large alterations and additions here: *e.g.*, submission of 'no case' (note 1): explanation to accused as to giving of evidence on oath or making statement in defence (note 2): duty of counsel or defending officer to 'conduct' case for defence (note 5); effect of an unsworn statement by accused (note 9). See also note 12.
- Rule 41.** Note 2 has been found necessary in practice.
- Rule 42.** There is much new and important material in connection with 'summing-up'.
- Rule 43.** Note 2 relating to the order etc. of deliberation in closed court is new and should be useful.
- Rule 44.** Note 5 as re-drafted deals with a matter of which we have had experience. The illustrations of 'special findings' in the last 3 paragraphs of the same note are new.
- Rule 45.** Note 3 is J. A. G.'s ruling.
- Rule 46.** Many of the notes are new or re-drafted.
- Rule 47.** Note 2 is quite new.

- Rule 50.* A fresh attempt has been made in note 1 to obviate the most frequently committed of all court-martial irregularities.
- Rule 51.* The two paragraphs at the end of note 4 dealing with illegal and excessive sentences should elucidate a matter which has bothered many officers. In note 6 the question of confirmation of court-martial proceedings by the officer who is commanding officer of accused is dealt with.
- Rule 52.* Note 4 is largely new and deals with a point which has frequently arisen.
- Rule 53.* The early paragraphs of note 1 are new.
- Rule 54.* The explanatory matter given in note 2 is important.
- Rule 55.* Several additions are made and the illustrations of sentences which ought to be varied by the confirming officer are new.
- Rule 56.* The examples of cases where the confirming officer may confirm notwithstanding technical deviations are new.
- Rule 57.* Note 2 relating to insanity cases is quite new.
- Rule 60.* The second paragraph of note 1 refers to a matter which not infrequently arises. Note 5 explains where explanation was badly needed.
- Rule 61.* This is a new note and necessary.
- Rule 62.* More than 2/3rds of the notes here have been either re-written or newly added. The general principles to be adopted in determining whether charges are to be placed in one or in more than one charge sheet are mainly new. Note 6 is new.
- Rule 63.* There is new material in all three notes—see especially ‘sitting in camera.’
- Rule 65.* There are some new notes dealing with ‘adjournment.’
- Rule 69.* Note 2 deals with the president’s ‘casting vote.’ The illustration in note 3 of the procedure to be adopted in arriving at a sentence is changed.
- Rule 70.* Submission of ‘no case to answer’ is again referred to.
- Rule 71.* Notes 3 and 4 are new; note 4 is of some importance.
- Rule 73.* Note 3 is in part re-written and added to.
- Rules 75 and 76.* The notes are new.
- Rule 78.* The reference to the service of a summons upon witnesses in note 5 (paragraph 2) is new.

- Rule** 80. Notes 1, 3, 5, 6, 8 (parts of) and 10 are new.
Note 8 requires careful noting.
- Rule** 81. The notes are all new.
- Rule** 83. Note 1 is an important one.
- Rule** 84. Additions here.
- Rules** 85 and 86. The notes, many of which are new, require study—
see in particular notes 3 and 4 to R.P. 86.
- Rule** 87. New notes here.
- Rule** 93. The note is new and important.
- Rule** 105. Paragraph 2 of note 2 is important—also the last paragraph
of that note.
- Rule** 106. The notes are almost entirely new.
- Rule** 112. Note 2 is new.
- Rule** 124. New notes here.

Appendices to Rules of Procedure 1926.

There are but few amendments here, none of which require special
noting.

Forms of Charges—Part I.

Most of the changes are due to alteration of nomenclature.

Forms of Charges—Part II.

The only alterations are due to changes in the Act.

Specimen Charges.

The number has been increased from 87 to 112. Some of the old
specimen charges have been omitted and others have been retained in
slightly altered form.

The new specimens are in respect of—

- | | | | | |
|-----|-----|-------------------|----|---|
| No. | 6. | Section 6 (1) (k) | .. | Sentry leaving post. |
| „ | 12. | „ 6 (3) (c) | .. | Impeding a N. C. O. |
| „ | 44. | „ 17 | .. | Fraudulent misapplication of public
money. |
| „ | 53. | „ 18 (4) | .. | Stealing public money. |
| „ | 56. | „ 18 (4) | .. | Embezzling mess money. |
| „ | 58. | „ 18 (5) | .. | Presenting pay roll with bogus-entries. |
| „ | 59. | „ 18 (5) | .. | Presenting bogus birth certificate. |
| „ | 60. | „ 18 (5) | .. | Disgraceful conduct of a cruel kind. |

No. 71.	Section 25 (1)	.. Making false statement in a report.
„ 72.	„ 25 (1)	.. Making fraudulent statement in pay list.
„ 73.	„ 25 (1)	.. Making fraudulent omission from stock book.
„ 90.	„ 40	.. Telephone operator asleep.
„ 92.	„ 40	.. Negligent handling of rifle causing injuries.
„ 93.	„ 40	.. Sending a bogus medical certificate.
„ 94.	„ 40	.. Loss of public money through negligence.
„ 96.	„ 41	.. Manslaughter.
„ 98.	„ 41	.. Housebreaking and larceny.
„ 99.	„ 41	.. Housebreaking with intent.
„ 101.	„ 41	.. Wounding with intent to do grievous bodily harm.
„ 102.	„ 41	.. Common assault.
„ 104.	„ 41	.. Fraudulent conversion.
„ 105.	„ 41	.. False pretences.
„ 107.	„ 41	.. Uttering forged document.
„ 108.	„ 41	.. Fraudulent misapplication by soldier after ceasing to be such.

The Form of Proceedings on page 679 of the present manual will be found on page 741 of the new manual. There are, of course, many alterations due to the new Army Form A-9 which follows the Rules of Procedure 1926.

The following features are new —

- (1) The different variations have set out beneath them the relevant Rule of Procedure which necessitates them.
- (2) Variations as to amendments of a charge.
R. P. 33 (A) and (B) (p. 745).
- (3) Variation as to plea to jurisdiction contains additional explanatory matter (R. P. 34) (p. 745).
- (4) Variation as to unfitness to plead owing to insanity (R. P. 57) (p. 745).

- (5) Variation as to alteration of plea (R. P. 37 (D)) (p. 747).
- (6) Variation as to objection to evidence or procedure (R. P. 70) (p. 748).
- (7) Variation as to recalling witnesses (R. P. 86) (p. 751).
- (8) There are several additions to 'finding' on pages 752-753.

Forms of Oath etc.

These are, of course, a new feature.

Memoranda (p. 702 present manual).

These have been added to considerably and the following are new :— 1. 2 (*d*) and (*h*). 3 (*d*) (*e*) (*n*) (*o*) (*p*) (*q*) (*s*) (*u*) (*v*) (*w*). 4 (*f*). 6 (*b*) (*g*) (*h*). 9. 10. 11. 14. 16. 17. 18. 22. 23. 29.

MILITARY NOTES.

BELGIUM.

Inspector-General of Aviation and A. A. Defences.

By an *arrêté royal* of the 21st March 1929, the above named post has been added to the list of Inspectors-General in the Belgian Army.

His duties of inspection extend over all instructional matters connected with aviation and anti-aircraft defences amongst the army formations, schools, services and establishments.

As a permanent subordinate of the Minister of National Defence he is responsible for all statistics regarding aviation and anti-aircraft services during manœuvres and range exercises.

He elaborates the necessary instructions as regards liaison between the aviation and the anti-aircraft defences and decides on the annual training which shall take place for these two formations.

Ecole Militaire.

The Minister of National Defence has decided that, for the year 1929, there shall be 40 candidates for artillery and engineer commissions and 45 candidates for infantry and cavalry commissions.

NOTES ON MILITARY REVIEWS.

"Bulletin Belge des Sciences Militaires."

March, 1929.

Published by Impr. Typo, de l'Institut Cartographique Militaire, Brussels.

Price, 1 Belga.

1. *The Armies in the Western Alps.* Part III. *Passage of the Alps by Napoleon.* (Continued). By Major Delvaux. Of interest.

This is the story of Napoleon's invasion of Italy in 1800 after his return from Egypt. The work is of decided interest to the student of military history, giving as it does in great detail the almost superhuman difficulties overcome by a military leader in the passage of the Great St. Bernard Pass.

The work is divided into the following main divisions :—

- (a) The creation on 7th January, 1800, of a reserve army of 30,000 men under Berthier, page 219. Under this paragraph is explained Napoleon's plan of marching in support of Massena and of crossing the St. Bernard Pass

with a view to separating the Austrian from the Italian army and by a single battle ensuring the defeat of Italy.

- (b) The reconnaissance of the passes, pages 221-225, by General Marescot, whose favourable report as to the possibilities of undertaking the crossing of the St. Bernard settles any misgivings which Napoleon may have harboured as to the wisdom of the undertaking.

An appreciation of the difficulties which this passage of the pass involved, are interestingly set forth on pages 224-225.

- (c) The passage of the Alps, pages 230-239. Napoleon reviews his divisions at Lausanne on 13th May, 1800. The advance guard under Lannes leaves Saint Pierre on 14th May.

A graphic description of Napoleon's personal experiences of the crossing, mounted on a mule led by an Alpine guide is given on page 236.

Lannes eventually attacks and defeats the Austrians on the River Chiusella and Napoleon enters Milan on 2nd June.

- 2. *The Battle of Tannenberg. From German official accounts.* By Captain Vendaele. Part III. *The surrounding of the Russian centre.—The day of 28th August.—The general attack.* Of historical interest.

This article continued from the last number deals with the following actions:—

Part I.

- (a) The action taken by the German High Command and the operation orders for 28th August.

- (b) The action of the western group of the 8th German Army (20th and 1st Corps).

- (c) The action of the eastern group (17th and 1st Reserve Corps).

- (d) The action taken by the High Command on the evening of 28th August.

Part II.

- (a) The day of 29th August—the pursuit—the general situation on the morning of the 29th both of the Russian Army and of the 8th German Army.

- (b) The last engagements near Hohenstein.
- (c) The pursuit.
- (d) The action of German High Command on 29th August.

A good map illustrating the operations under discussion is attached to the last page of this article.

April.

1. *A day on the Defensive.*—(Continued). *Translated from the German Article in "Kriegskunst in Wort und Bild."* (Of interest for junior officers and non-commissioned officers, especially from the point of indoor lectures.)

This narrative compiled much on the lines of the "Defence of Duffers Drift" which became famous after the South African War, deals in this April number with five lessons for the consideration of platoon or section commanders under service conditions.

In the March number, three lessons were dealt with. In this edition we have the following lessons:—

- (1) The sighting and emplacement of heavy machine guns in rear of a hillock under cover of darkness by a non-commissioned officer in charge of a machine gun section.
- (2) The task of selecting two alternative positions for a section of light mortars by the non-commissioned officer in charge of the section under cover of darkness.
- (3) A problem on the establishment of signal communications by the signal platoon of an infantry battalion by night. The platoon consists of one light team of telephonists, four construction teams, six teams of signallers, one team of observers, two teams of dogs.
- (4) Night problems for a battery of artillery including an air raid on the battery position.
- (5) Problem for a non-commissioned officer in charge of a motor transport section of two lorries who receives an order to carry out a special mission under the difficult conditions of congested roads, caused by the retirement of the army to which he belongs. The problem set is how the non-commissioned officer accomplishes his task.

2. *The "Tente-Abri," taken from the Italian Army publication in the Review "Esercito-e-Nazione."* Of interest.

This is a description of the *Tente d'abri* adopted in 1928 by the Italian Army. The article deals with the following subjects:—

- (a) Material of which the tent is composed.
- (b) Uses to which the sections of the tent can be adapted, i.e., cloak, sleeping sack, mattress and the numbers of men who can be accommodated.
- (c) The profiles of the various types of *Tente d'abri*.
- (d) Methods of heating.
- (e) Employment of the various sections as camouflage.

The Belgian Army think very highly of this Italian method of protecting the soldier on service.

3. *Battle of Tannenberg from the official German publications. Part IV. The End of the Battle, 30th and 31st August, 1914.*

This chapter terminates the narrative of the battle of Tannenberg in which the German 8th Army under Ludendorff defeated the Russian Army.

The Russian Army was numerically stronger than the 8th German Army. The Russian troops under General Samsonof alone comprised five corps, and three cavalry divisions who had hardly been engaged. The total forces on the two sides were as follows:—

—	Germans.	Russians.
Infantry	153 battalions	175 battalions
Cavalry	53 squadrons	99 squadrons
Machine guns ..	296	384
Guns	728	612

Under these conditions the victory of Tannenberg should be attributed to the superiority of the German High Command.

May.

1. *Programmes of Artillery Fire.* By Major Sottiaux.

This is a very lengthy discussion on artillery problems. The author prefaces his article by stating that the moment a battle is imminent, whether it be an offensive or defensive combat, it is

necessary that the action of the various artillery groups available for the battle shall be co-ordinated with the maximum of precision, with a view to exploiting to the greatest possible extent the advantages to be gained by concentration of fire and mutual support. In other words it is necessary in all actions to draw up in all echelons, from the army corps down to the battery and even down to the gun itself, co-ordinated programmes of fire.

It is to the examination of these programmes of artillery fire that the author proposes to dedicate this study.

The object of this article is to analyse the duties of the principal artillery commanders from the point of view of fire organization.

2. *Protection of Tank Personnel against shock.*

By Lieutenant de Grave. Of interest.

The external protection of tanks has been treated in articles in the *Bulletin Belge* in its publications between December, 1927 to October, 1928.

In this article the author treats the subjects of the protection of the personnel inside the tank.

The light Renault tank is dealt with, which contains two inside chambers.

The Renault tank is provided with a double suspension, the one supplied with spring buffers, the second by ordinary carriage springs located in the side rails.

As for the protection of the men themselves inside the tank, the author advocates the British Army method of padded clothing in place of the steel helmet and leather combination garment.

As regards head protection the Belgians advocate the tankophone, both from the point of view of protection and for the purposes of hearing and intercommunication.

This tankophone will probably be introduced shortly into the Belgian Army.

BULGARIA.

The Army.

On 24th April, M. Bouroff made a long speech in the Sobranje on foreign affairs. The greater part of his speech was devoted to non-military questions, together with an eulogy of the League of Nations, which according to the speaker has been of more value to

Bulgaria than to any other country. M. Bouroff, however, spoke for a short time about the Bulgarian Army and made the usual complaint that the voluntary army imposed by the Treaty of Neuilly is a heavy financial burden on the country.

He also pointed out that under conscription the barracks had been a finishing school for the youth of Bulgaria, inculcating deeply a sense of civic duty. Deprived of this education the youth of Bulgaria had become a fertile soil for Communism.

M. Bouroff concluded by saying that Bulgaria does not wish for a large army and that he hoped that a modification of the relevant clauses of the Treaty of Neuilly might before long win a favourable reception in the countries concerned.

Nautical Training School.

A bill has been introduced in the Sobranje with regard to the formation of a Nautical Training School under the control of the Maritime and River Police Service Department, and the Nautical Training Detachment of the Ministry of Railways, Posts and Telegraphs. The object of the school is to train engineers and sailors for the mercantile marine, naval coast services and maritime aviation.

The reason for the bill is that the Bulgarian Government has become conscious of the lack of trained seamen in Bulgaria. Originally Russian and French seamen were employed in the Bulgarian Navy and Russian, Croat and Dalmatian sailors in the Merchant Service. Before the Great War, Bulgarians were sent abroad to various countries to be trained in naval seamanship, but these foreign sources of training were not sufficient. Since the war it has become impossible to carry on the system of training abroad and, as a result, the state of navigation in Bulgaria is extremely parlous. This Nautical School is, therefore, to be instituted to provide officers for the mercantile marine, State maritime and river police services, officers for the ports, marine pilots for maritime aviation, and officers for the seagoing craft of the maritime fisheries. Altogether, about 230 trained sailors are required for the next 15 to 20 years, while only 50 or 60 are, at present, available. It has, therefore, been decided to establish this school to pass out 10 pupils annually.

In order that the school should not be expensive it has been decided to open the nautical classes in conjunction with the existing Engineering School, or, rather, to transform one engineering class into a nautical class. The existing engineer class admits yearly 40 students for two parallel classes ; in future, the engineer class will still admit 40 students of whom 30 will be engineers and 10 sailors. The number of teachers will remain the same, but certain teachers will be replaced by others according to their specialities.

The real purpose of the bill is, therefore, to organize, stabilize and adapt the Engineering School, so that it may begin to meet systematically the mercantile marine's needs for sailors in the same way as it has heretofore done for marine engineers.

FRANCE.

The utilization of civilian personnel.

The following are extracts from the *rappports* of the French Finance Commission which dealt with estimates for the military budget for 1929 :—

“The substitution of military by civilian personnel is being effected gradually and on a methodical plan throughout all corps and administrative services, upto and including the central administrative authorities.

The new civilian personnel are classified under various categories.

(a) *Military officials and subordinate officials* recruited, after preliminary examination, from the competing candidates, according to vacancies, from candidates with civil qualifications (head clerks in offices, office clerks and copying clerks, coming under the decree of 11th May, 1907), and, should these two sources prove inadequate, from certain classes of other civilian candidates.

The duties of military officials and subordinate officials will be to deal with work relating to the preparation of mobilization, in units and mobilization centres, headquarters and administrative services, acting as accountants or storekeepers ; further, the accountants will assist in the general administrative services of a unit (commandant's or paymaster's office, equipment office, &c.).

The statute referring to this category of personnel is explained in its broad lines by the law of 9th April, 1926, of which the decree of 17th July, 1926, comprising regulations of public administration, has defined the details of application; they are entitled to full civilian and political rights; in consideration, however, of their connection with the troops and the nature of their work, they are subject, in the exercise of their duties, to the general regulations of military discipline; furthermore, the provisions of military law are applicable to them, in respect of certain breaches of discipline defined by the law.

Article 103 of the Recruiting Law of 31st March, 1928, fixes 15,000 as the total establishment of military officials and subordinates to be recruited before the reduction in the length of military service comes into force. The number of candidates for appointment is very high, and it may, therefore, be assumed that the total establishment required may be attained without difficulty in 1930.

For 1929, estimates have been drawn up on the basis of a budgetary strength of 10,500 units, *i. e.*, an increase of 3,000 upon that of 1928, and distributed as follows :—

Ranks.	Home country.			Algeria-Tunisia.			General total.		
	Troops of the Home Army (including Algeria).	Colonial troops.	Total.	Troops of the Home Army (including Algeria).	Colonial troops.	Total.	Troops of the Home Army (including Algeria).	Colonial troops.	Total.
Administrative officers.	422	16	438	60	2	62	482	18	500
Officials	4,057	154	4,211	568	21	589	4,625	175	4,800
Subordinate officials.	4,384	165	4,549	629	22	651	5,013	187	5,200
Totals	8,863	335	9,198	1,257	45	1,302	10,120	380	10,500

This average strength corresponded, at the close of the financial year, to an actual strength of 11,800 officials, and involves an increase in estimates amounting to 34,654,260 francs.

(b) *Other substitution civilian personnel.*—The recruiting law of 31st March, 1928, includes amongst its preliminary conditions, to be effected before the reduction in length of military service, the recruitment of a supplementary number of permanent civilian employees, which will bring the strength of these employees, who are to be included in the military services of the home country, to 30,000.

This total of 30,000 includes both employees, properly so called, and workmen. This personnel may be classified as follows:—

Employees in factories, governed by the decree of 11th May, 1907.

Employees at headquarters, schools, administrative services and recruiting offices, at present governed by the instruction of 1st December, 1916.

Filing and accountant clerks and assistant clerks, the statute for whom has not yet been defined.

Workmen, governed by the decree of 26th February, 1897, and employed in parks and constructional establishments, schools and hospitals.

Temporary assistants at the Central Administration governed by the decree of 9th September, 1927.

(c) *Temporary personnel for mobilization centres.*—The law of 13th July, 1927, provides in Article 29 that labour employed in mobilization centres shall be exclusively civilian. But, apart from military officials and their subordinates, in mobilization centres no permanent civilian personnel exists, since the requirements in labour for the storage and maintenance of material vary too much in the course of the year to permit of the employment of such personnel.

Personnel are engaged for a maximum period of three months by a temporary renewable contract; every person so engaged must state in writing that they are prepared to accept discharge upon the expiration of the contract. Under these conditions, the recruiting of labour by direct engagement is not without its difficulties; and in order to get over them, military administrative authorities are considering the possibility of providing for the maintenance of material in mobilization centres by contract, under conditions to be stated later.

The formation of a large number of new mobilization centres in 1929 will, however, necessitate the provision of a supplementary vote of 23,230,000 francs, for the payment of civilian labour temporarily engaged in these centres.

(d) *Women cooks in units.*—Women head cooks engaged in units are employees paid by the mess, not salaried officials under the War Department ; from the point of view of "workmen's compensation," they come under the law of 9th April, 1898, by virtue of the first article of the law of 2nd August, 1923, which refers to wage-earning and salaried servants of the same class, whether or not personal servants.

(e) *Personnel in regimental workshops, of foremen, tailors, shoemakers and saddlers.*—Under the present system, military labour at the disposal of foremen is composed of —

Workmen (on principle, professionals and of the auxiliary services), allotted, on incorporation, to headquarter units.

Two workmen per administrative unit, one fully qualified and one apprentice, mobilizable with their unit, and, on principle, fit for general service.

(f) *Personnel for upkeep of barracks, furniture, heating, lighting and wheeled transport for current use in units.*—An experiment has been carried out, with a view to determining the conditions under which these various maintenance duties, at present effected in units by military labour, might be transferred to civilian contracts, leaving to the fatigue party only those small jobs which, owing to their urgency, must absolutely be carried out by military labour.

The experiment proved that the fatigue party of a grouped infantry regiment might, under these conditions and allowing for absences, be reduced to 6 men ; for the whole army, therefore, this scheme would release a total of approximately 3,000 men for training.

(g) Lastly, as the concluding point in the question of the substitution of civilian for military labour, an estimate of 11,488,350 francs was submitted for carrying out this substitution in Morocco and the Levant ; where the reduction in the length of service makes it even more difficult than elsewhere to employ men of the annual contingent in the various duties of clerks and workmen. These duties must therefore be carried out, either by professional soldiers, allowed

for in effectives provided for in the budget, or by civilian personnel, for whose maintenance the above estimate is submitted. It should, moreover, be noted that this civilian personnel is not included in the 30,000 coming under Article 103 of the recruiting law, who are to be employed exclusively in the administrative services of the home country.

PROGRAMME FOR THE INDUSTRIALIZATION OF THE ARMY.

The substitution of civilian for military labour is onerous. It requires, moreover, constant vigilance on the part of commanders, to ensure that soldiers are not still being employed at the same time as the civilians engaged to replace them. The War Minister has ordered special inspections for this purpose, to be carried out by an official of the department dealing with administrative returns assisted by a staff officer, and similar to the inspections of effectives carried out during the war under the Dalbiez Act. At the same time, however, the War Ministry are endeavouring, as far as possible, to reduce the number of civilian personnel to be engaged, partly by extending the system of working certain services by contract, and partly by using machinery.

Working of certain services by contract.

(a) *Transport*.—Under this heading, one of the first services which appears suitable for the scheme is transport within garrison areas.

The necessity for units to ensure the transport required for their daily existence or to assist in carrying it out by the provision of fatigue parties, is, in fact, one of the obligations which weighs most heavily upon them to the detriment of training. Everything therefore, points to the provision of some scheme to relieve them of their duties by placing contracts for this class of work.

Experiments have been carried out on these lines, in particular, for the delivery of food supplies ; instead of units coming, as on the existing system, to the supply stores, with their horses, wagons and fatigue parties, supplies would be delivered in barracks or quarters, transport being effected by contract through the supply services. The disadvantage of the system is that it is expensive ; in order to reduce expenditure, it is indeed possible to consider a reduction in the number of draught animals allotted to the units ; they are, however

required for training, which cannot be neglected, but they are not needed daily for this purpose, therefore it would be against Treasury interests to effect all garrison transport by contract, without utilizing draught horses for the transport work of the units on days when the latter are not employed for training.

(b) *Motor transport.*—Experience having proved the disadvantages which arise from allotting motor-vehicles to small garrisons, where, owing to the distance from the transport company to which they belong, they are often not kept in good running repair, military administrative authorities are testing, in a certain number of places, a system of contract agreements intended to replace vehicles allotted and ensure transport service by local transport contractors.

Vehicles allotted consisted of touring cars and ambulance vehicles. No difficulty has arisen in reference to touring cars; the contract system has proved quite satisfactory to employers and the generalization of the system as at present under consideration.

The question assumes a special aspect in reference to ambulance vehicles; civilian garage proprietors, as a rule, have none and, where they exist, they are the property either of the administrative committee of the civil hospital, or of the local Red Cross section which, whilst offering to assist the military authorities, frequently, refuse to bind themselves by an agreement. In places where it is definitely recognised that contracts cannot be made with the above-mentioned authorities, yet where it is absolutely essential to have the use of an ambulance, regional commanders have been asked to investigate the possibility of handing over the driving and maintenance of an allotted vehicle to a civilian garage proprietor.

(c) *Execution of major cleaning or repairs in camps.*—In pursuance of the same object, to release the largest possible number of men for training, the War Department has included an estimate for 700,000 francs in the draft budget for 1929, to allow of the execution of major work in cleaning or repairs in camps (beating of bedclothes and rugs, disinfection of premises, upkeep of barracks), either by civilian labour temporarily engaged or by placing contract agreements. The choice of methods will be determined by local conditions and a contract will be made whenever possible.

(d) *Mobilization centres.*—As stated above, the War Ministry are carrying out experiments with a view to providing for the maintenance of material at mobilization centres by contract.

Two classes of experiments are to be tried :—

One, to be made in two regions, is a scheme to hand over to local contractors, in accordance with the regulations of contract conditions, the majority of the equipment stocked in the centres, every possible precaution being taken to safeguard the secrets of mobilization.

The other would consist in making use of those foremen who, owing to the breaking up of a certain number of units, will be out of employment for some time, and to make those who are prepared to do so, enter into a contract for the maintenance of equipment stored in mobilization dépôts, who would employ personnel recruited and paid by them.

(e) *Supply.*—The War Ministry are investigating methods for placing contracts for the maintenance of mobilization stores wherever possible.

(f) *Army Medical Service.*—In this service, contract agreements may be of two types : there could obviously be no question of running certain hospitals entirely by contract, as was formerly done ; this method of administration, which is essentially unfavourable to patients, has been abandoned for some time. There is, however, one type of contractor specially qualified for the care of patients, to whom it would be advisable for military administrative authorities to apply in a large number of cases, *i.e.*, the civilian hospitals.

The most comprehensive formula for this type of contract involves the closing of military hospitals and the treatment of patients in civilian or general hospitals. The War Ministry has employed this method on a large scale. In fact, it must be remembered that, firstly, Article 1 of the law of 3rd August, 1926, and secondly, the decree of 10th September, 1926, authorized the suppression of a certain number of military hospitals, as *e.g.*, at Calais, Cambrai, Thionville, Sarrebourg, Morhange, Toul, Colmar, Mulhouse, Chambéry, Bastia, le Becquet at Bordeaux, Villemanzuy at Lyon and the Convalescent Home at Sées (Orne).

A certain number of these hospitals have been closed, as authorized ; in other cases, it has been hitherto impossible to take

action, on account of the difficulty of negotiations to be effected with the municipal authorities, in order to ensure the treatment of patients in general hospitals; but the War Ministry are endeavouring, wherever it is possible, to complete the execution of the above-mentioned texts.

These authorities are, however, compelled, in conformity with the first article of the Act of 7th July, 1877, to retain one military hospital in each region, in order to ensure the training of personnel, in view of mobilization. It appears, however, that whilst maintaining the autonomy of this military hospital, it would in many cases be advantageous to the army to hand over the general work to civilian hospitals, especially in large towns, where the total of civilian patients far exceeds that of the military.

On these lines, negotiations have been opened with the Poor Law authorities in Paris. This request of the War Ministry met with a ready response.

Development of machinery.

The War Ministry have, also, sought in the development of machinery, a means of reducing civilian labour in the services in which it is employed, as well as military labour employed in extra fatigue parties in units.

Certain results have been obtained up to the present.

The modernization of kitchens should permit of economy in military personnel, with a view to releasing them for training and the improvement of the mess in both quality and quantity. This modernization began with the recruiting of civilian women cooks. It should be followed up by the use of machinery of various kinds; military administrative authorities are considering, in particular, the following :—

Potato peeler with accessories.

Closed cookers.

Coffee strainers.

Substitution of gas for coal.

Provision of dining halls.

Mechanical washer for dishes, &c., and utensils.

The extension of the telephone system will also permit of a great economy in military orderlies: an estimate of 300,000 francs is included for this purpose.

Simplification in the working of administrative services.

As a complement to the measures discussed above, the War Ministry has sought and continue to seek for means of simplifying the working of administrative services.

A commission has been appointed, for the purpose of examining the question of administrative decentralization in the three following forms :—

General authorization for expenditure to be granted to regional commanders, to enable them to ensure, by means of a lump sum, granted annually, the whole or part of a service within the area of their command.

Delegation of authority to be granted to regional commanders, enabling them to settle questions of minor importance, which do not justify the intervention of a Minister, by delegation.

Delegation by regional commanders to their Directors of Administrative Services, which might possibly—on principle and allowing for exceptional circumstances—be made compulsory.

The War Minister has also had under consideration methods for providing the great Services of his Department with working funds, *fonds de roulement*, enabling them to assimilate their methods to those of private industry ; these investigations are now in progress ; they are to be carried on by agreement with the Finance Department.

In artillery factories, the contract system has been applied, up to the present, only in constructional works, which produce in series, with the exception of parks employed in the care and preservation of material. Since then experiments with contract work have been carried out successfully in a regional artillery park ; by this means a very great increase in output, in certain workshops, was proved.

In order to estimate, by an experiment on a larger scale, the results of the system, contract work was tried in a certain number of regional artillery parks ; if, as may be expected, the earlier results are confirmed, the system will be generally adopted for work to which it may be considered applicable.

In order to complete the simplification to be effected in the administrative working of the Army Medical Service, by the

introduction of the contract system discussed above, the War Ministry are also considering the advisability of grouping all military hospitals within the same region under one single management.

Moreover, important simplifications have been introduced in the administration of units. Thus, the latter were required to submit to the Central Administrative Authorities, at the end of each year and in relation to each fund, a detailed statement of the final annual account of the fund and send in an inventory of material and stores belonging to the fund up to 31st December.

Mobilization centres, like units, receive, for the upkeep of stores and mobilization material, either money allowances, in the form of a lump sum, administered by various methods in accordance with the categories of material in question, or in that of various articles supplied in kind by factories and administrative services. They are also required to meet certain expenses which are refunded upon production of special detailed accounts.

This diversity of methods entails a certain complication in documents and does not permit of economic management. In order to meet the case, it is proposed to establish a maintenance fund to provide for maintenance expenses for mobilization supplies and those relating to auxiliary services: furnishing, heating and lighting.

ARMY RE-ORGANIZATION LAWS.

The following is a translation of a recent Decree issued by M. Painlevé, French Minister of War :—

“ I have decided to complete the changes resulting from the coming into force of the new military laws (law of 13th July, 1927, on the general organization of the army; law of 28th March, 1928, concerning the constitution of cadres and effectives) in the home country and in the Rhineland, by 5th May, 1929.

“ This decision comprises the execution of the following measures on the date above mentioned :—

“ (a) Putting into force of the Decree of 23rd November, 1928, relative to the constitution of the Region of Paris and the altering of the boundaries of the 2nd, 3rd, 4th, 5th and 6th military regions.

“(b) Creation, constitution, transformation and disbanding of higher formations, special groups of arms, units, mobilization depots and centres, and stationing of units.

“The movements of troops entailed by these re-groupings, and which do not form the subject of special decisions, will be carried out between 15th April and 4th May, 1929.

“The date settled for the disbandment shall be 4th May, 1929, an exception being made for the units whose barracks have to be used for the installation of other units. These units, which will be designated by the commanders of regions, will be disbanded on 30th April, 1929.

“The detailed orders for the carrying out of the present decision will be notified, by my Central Administration, through the authority concerned.”

INCORPORATION OF 1929 CONTINGENT.

A Decree published in the *Journal Officiel* of the 7th April authorizes the incorporation, in October next, of those men born between 1st November, 1908, and 31st January, 1909. This is interesting, as it means that the age of incorporation will be 21 by the end of this year.

This measure has been introduced not only as an essential part of the one year's service bill, but also to quiet the outcry which has arisen recently owing to the deaths from influenza of a large number of young conscripts in the Rhineland.

The total number of the contingent called to the colours is 76,000 recruits, allocated as follows :—

Infantry	37,570
Cavalry	5,420
Artillery	16,300
Engineers	5,700
Aviation	4,800
Army Service Corps ..	2,070
Administrative Troops ..	1,490
Navy	2,650
	<hr/>
	76,000
	<hr/>

N.B.—Of these 76,000 recruits, 74,478 belong to the Metropolitan contingent, and 1,522 to the Algerian, Tunisian and Moroccan contingents. It is laid down that the contingent destined for the Army of the Rhine must comprise only vigorous men of strong constitution.

MECHANIZATION OF FOREIGN LEGION CAVALRY.

A Decree dated 4th April, 1929, has been signed allowing for the reorganization of one or two squadrons in the Foreign Legion Cavalry. If required, these may now be put on a mechanized basis, provided that the total number of effectives in each grade is not increased.

In the preamble to the Decree it is stated that provision has been made for this mechanization so that the security of the Algerian and Moroccan borders may be ensured, and so that the cavalry of the Foreign Legion may be in a position to carry out any special missions called for by the penetration of the Sahara.

“REVUE MILITAIRE FRANCAISE.”

Published by Berger-Levrault, Paris. Price, 5.50 francs.
March, 1929.

1. *The 42nd Division at Montdidier, 8th August, 1918.*
(Part 4.) By Colonel Grasset.

This instalment brings the narrative up to 0700 hours on 8th August. The movements and tasks of all units, both artillery and infantry, are described in the greatest detail. A map is included showing the position at 0634 hours.

2. *From the Old to the New Medical Regulations.* (Part 4.)
By Médecin-General Uzac.

This last instalment consists chiefly of a highly technical discussion on the treatment of wounds. The author concludes with a fervent appeal that staff officers should have some knowledge of the functioning of the medical service in wartime.

3. *A New Book on the Polish-Russian Campaign of 1920.*
By General Sikorski.

This article is written to serve as an introduction to General Sikorski's new book, which has been recently translated into French. The book describes the operations of the Polish Army in July and

August, 1920, with particular attention to the rôle of the 5th Polish Army under General Sikorski's own command.

It is interesting to note the lack of uniformity in the formations of the Polish Army, due to the fact that they had been formed from ex-German, Russian or Austrian units and armed with any weapons that were available.

The book is divided into four parts—

- (1) The defeat of the Polish Armies on their frontiers.
- (2) The battle on the Bug.
- (3) The operations on the Vistula and the engagement of the 5th Polish Army between the Wkra and the Narew.
- (4) The exploitation of the Polish victory and the destruction of the Soviet Armies.

4. *France as a Colonial Power.* By Captain Marchand.

In this instalment Captain Marchand discusses the present situation in the French colonies. He points out that the period of colonial expansion is finished and France must now concentrate on developing both the man-power and resources of her present Colonial Empire. To do this, he adds, she must encourage Frenchmen to emigrate to the Colonies and to lend their money to assist colonial enterprise.

April, 1929.

1. *The 42nd Division at Montdidier, 8th August, 1918.*
(Part 5.) By Colonel Grasset.

Starting with the situation at Villers-aux-Érables at 0730 hours, the narrative is carried on in its usual detail up till 1105 hours.

2. *After the Rabat Conference (July, 1928).* By General Meynier.

This article is of the greatest interest. It gives a short description of the work of each of the African Inter-Colonial Conferences which the French have held annually with the exception of 1925, since 1923. The ultimate objective and the ideal to be aimed at is the establishment of complete unity in French Africa by joining up the North African possessions with the Soudan, Niger and Tchad.

A most interesting description is given of the immense improvements carried out during the last few years in communications, which have enabled hitherto unknown districts to be opened up. Thanks to improvements in telephones, wireless and motor routes, it is now possible to go as far south as Hoggar in 8 days. This journey previously required a march of about 2 months.

The article is accompanied by an excellent map showing the various motor roads which have been reconnoitred or opened in the last few years.

3. *The Rôle and Instruction of Interpreters.* By Colonel Paquet.

This article points out that in order to carry out their duties properly and to get the best results from examining prisoners, interpreters must be trained in staff work. In order to accomplish this training, interpreters who are reserve officers should do a course of staff work during their periods of training. Details are given of a suggested 10 days' course.

4. *The General Structure of Napoleon's Offensive Campaigns.* By General Lemoine.

The author considers that it is possible to distinguish three principal phases in Napoleon's offensive campaigns.

- (1) A strategic offensive leading up to a decisive battle.
- (2) Exploitation of the initial victory changing to a strategic offensive after a certain period.
- (3) A strategic defensive combined with a tactical offensive.

Each of these phases is examined in detail, and various examples are quoted from Napoleon's campaigns.

SUPPRESSION OF TITLE OF "MARECHAL DE FRANCE."

By a decision of the French Government on 23rd May, 1929, the dignity of *Maréchal de France* has been dispensed with. No further marshals will be created, and the title will therefore disappear in due course after the death of the present incumbents, namely, Marshals Joffre, Pétain, Franchet d'Esperey and Lyautey.

G. O. C.-IN-C., ARMY OF RHINE.

General Jacquemot, Military Governor of Lyons, has been appointed to command the French Army of the Rhine, in succession to General Guillaumat.

NEW ORGANIZATION OF THE "TRAIN."

A decree was published dated 6th May, 1929, creating an Inspector-General of the Train, who is to be a colonel or a *Général de Brigade*. His duties will be to inspect the train and the mobilization centres for the train; he is to report to the Inspector-General of the Army. He is also to sit on all committees dealing with technical questions concerning the train and dealing with the study of material for its use.

Orders, decrees, &c., will be communicated to him through the Inspectorate of Cavalry. He is to have a staff consisting of a senior officer of the train as chief of staff, and a junior officer either of the train or of the cavalry. He will be responsible for reporting on colonels in the train who are recommended for promotion or for the higher grades of the Legion of Honour.

FRENCH NORTH AFRICA.

ALGERIA AND TUNISIA.

The following are extracts from the *rapports* of the French Finance Commission which dealt with the estimates for the Military Budget for 1929 :—

"Our army in Algeria and Tunisia, though excellent when it possesses well chosen cadres, acquainted with the language and customs of the country, understanding the men and thus able to gain their confidence, loses much of its value when cadres are improvised or indifferent in quality.

But, since the war, a serious crisis has occurred in the recruiting of these cadres. Officers of the home country who, before 1914, contended for the honour of serving in Algeria, often have to be appointed *ex-officio* to fill up vacancies; applications for re-engagement by French non-commissioned officers are not sufficiently numerous to permit of selection which is essential; the rate of enlistments and especially of re-engagements amongst natives is still inadequate and will require to be considerably increased; the

material position of native non-commissioned officers in particular, is precarious and this in itself is unfavourable to recruiting ; lastly, the legionaries are now, for the most part, leaving at the conclusion of their engagement, whereas prior to 1914, the large number of reengagements formed the great strength of the Legion.

During last year, this state of affairs was the subject of an enquiry made by the Military Committee of the Chamber of Deputies, as a result of which the Chairman of this Committee proposed a resolution, the clauses of which led to the following conclusion :—

The present unpopularity of the Algerian Corps is due, in particular, to the inadequate advantages offered to officers serving in North Africa.

On 13th March, 1928, the following resolution was adopted by the Chamber of Deputies, requesting the Government :—

To consider the introduction of suitable measures for the improvement of the material and moral position of French regular military officers and soldiers serving in Algeria in order to ensure to this army a picked French cadre of officers and non-commissioned officers.

To utilize more extensively the resources in man power which Algeria is in a position to provide for national defence, on the understanding that the effort to be made should, in peace time, be specially directed to the voluntary recruiting of regular military officers and soldiers.

This subject had previously been under consideration in the War Department, since the army in Africa is to form one of the essential forces in the new organization of the French Army. It is, in particular, one of the principal elements of the mobile forces which, in case of need, would guarantee the defence of our over-seas possessions.”

GREECE.

RELATIONS WITH YUGO-SLAVIA.

Six protocols of the Treaty of Friendship between Greece and Yugo-Slavia were signed at Geneva on 17th March. The first protocol concerns railway services between Ghevgheli and Salonica ;

the second, the use of the Yugo-Slav Free Zone at Salonica ; while the remainder deal with customs service, veterinary service, postal service, and various general questions.

The protocols are based on the Greco-Yugo Slav Convention of 1923. The Salonica Free Zone, which will remain under Greek sovereignty, will henceforth be open to Yugo-Slav commerce in both directions. Direct trains with special time tables are to be run between Salonica and Ghevgheli. Should any differences arise they are to be submitted to arbitration, and, in the last resort, to the League of Nations.

On 27th March a " Pact of Friendship, Conciliation and Judicial Settlement " was signed at Belgrade. All contentions of a judicial nature are to be settled by the Permanent International Court of Justice. Other cases are to be submitted to a permanent committee of five members, and finally to the League of Nations or " some other tribunal of arbitration composed especially for the case," should the committee of five fail to agree.

This latter provision is the only deviation from the model treaty drawn up by the League of Nations. It is probable that it is a slight compensation to the Yugo-Slavs over eventual territorial disputes about the Salonica Free Zone and Railway, as they were unwilling to accept the final arbitration of the League, but have generally been forced to give way.

The pact is binding for 5 years.

Comment.

No information has yet been received concerning the passage of munitions of war through the free zone and the Ghevgheli railway, and it will be noticed that munitions are not mentioned in the protocols or the pact.

POLAND.

INTERNATIONAL SKI CHAMPIONSHIPS.

Among the various international events at Zakopane was a military patrol race, which took place on 9th February.

Representative teams from the armies of the undermentioned countries took part, the names being shown in the order of merit attained in the competition :—

Finland.

Poland.

Roumania.

Czecho-Slovakia.

Yugo-Slovakia.

France.

Each team consisted of a patrol of one officer or aspirant-officer and three privates, with one man in reserve. The competitors wore field service uniform, ski-ing order, with pack or haversack weighing not less than 7·25 kilos, and carried a rifle or carbine with 10 rounds of ammunition, but without bayonet. The patrol commander carried a pistol in place of a rifle. The course was over 28 kilometres, in which the uphill, downhill and flat portions were more or less equally represented. Some of the ground was thickly wooded and broken, and preliminary reconnaissance was difficult, as the exact route was only published about 18 hours before the start.

The race commenced in a snow-storm on an extremely cold day. In places leaders of teams had to cut their way through the brushwood. Along the course, the whole of each patrol had to pass in closed formation within 10 metres of the control points, of which four had been established. At a distance of some 19 kilometres from the start, 10 rounds per man had to be fired at 13 figure targets at ranges between 150 and 200 metres, the number of hits obtained by a team counting towards a maximum of about 25 per cent. of the total marks available in the competition. The winning Finnish team covered the course in slightly less than 3½ hours, and was credited with 20 shots on the targets.

ITALY.

ARMY ESTIMATES FOR 1929-30.

The Provisional Italian Army Estimates for the year 1929-30, as compared with the two preceding years, are as follows :—

—	1929-30.	1928-29.	1927-28.
	£	£	£
Ordinary	26,802,200	26,017,900	26,299,800
Extraordinary	2,561,800	2,691,500	3,696,500
Total.. ..	29,364,000	28,709,400	29,996,300

It will be seen from the above figures that the Estimates for the year 1929-30 exceed the appropriations for 1928-29 by £654,600, but are less than the 1927-28 figures by £632,300. The chief increases of the current year over the year 1928-29 are due to the higher cost of foodstuffs, equipment, services and material, pensions and allowances to officers, and an increased expenditure on military establishments and institutions.

Extraordinary expenditure includes, amongst other items, general expenditure, expenditure resulting from the war, and expenditure on military buildings.

No radical change of policy or organization is indicated by these estimates.

SITUATION IN LIBYA.

Reports show further rebel activity in Cyrenaica during February and March.

About 1st February a large rebel band attacked Regima (about 25 miles east of Bengasi), El Abiar (about 20 miles east of Regima) and Tocra (about 40 miles north of Bengasi on the coast), and drove off cattle and sheep. The gendarmerie encountered the rebels in the vicinity of El Abiar. In the ensuing fight the gendarmerie lost about 30 killed and several wounded and were only saved from further losses by the arrival of a squadron of armoured cars which inflicted heavy casualties amongst the rebels who took to flight leaving behind their booty and 14 prisoners.

On 17th February a strong rebel band drove off 600 camels belonging to a tribe near Soluch, and again on 20th February 600

camels were taken from the vicinity of Tocra. Rebel activity has also been reported from Tobruk (on the coast about midway between the Egyptian frontier and Derna), and the Colonel commanding the Tobruk garrison and Zone has been wounded.

On 13th March the 7th Libyans and the 13th Eritreans started a sweeping movement from the redoubt of Gerdes El Abid (about 60 miles north-east of Bengasi) in order to clear the area of certain rebels who were reported in the vicinity. Through information received from the Air Service, the column gained contact with the rebels who attacked the 7th Libyans and attempted to surround them. The Libyans counter-attacked with the bayonet and eventually drove off the rebels who left behind 20 killed and 30 wounded. The Italian losses were one captain, one Italian serjeant and 25 Ascaris killed and 16 wounded.

During the first week in April a band of rebels consisting of some 250 armed men with a caravan of 150 camels started out from the Harugi Mountains (immediately south of Zella) with the intention of raiding the submitted tribes near Agedabia and Aghalia. The Italians had news of this band at the end of March and their aeroplanes located it far south of Agedabia early in April. Thereupon the 14th and 15th Eritreans supported by armoured cars moved out from Aghalia and Agedabia and took up a position in the Wadi El Faregh which runs east and west about 20 miles south of Aghalia. The aeroplanes kept the rebels under observation and on 6th April the armoured cars attacked, being joined later by the 15th Eritreans who surrounded the rebels at a point in the Wadi El Faregh approximately south of Agedabia. The rebels were almost exterminated, 170 dead being counted including their two leaders, and 150 rifles were picked up. The Italian losses were one Italian non-commissioned officer and four Ascaris killed and about 20 Ascaris wounded.

JAPAN.

FORMATION OF JAPANESE AIR TRANSPORT COMPANY.

The development of civil air routes in Japan has recently been placed upon a secure business footing by the formation of the "Air Transportation Company, Limited" (Nippon Koku Yuso Kabushiki Kaisha). The capital of the company is approximately £1,000,000,

and it is the first firm of its kind to be launched in Japan. Its establishment is the result of the passage of a Bill through the Imperial Diet agreeing to provide a subsidy amounting to approximately £2,000,000, spread over 11 years. When the company recently offered its shares for public subscription they were over-subscribed by 140 times the original amount.

The proposed routes which it is hoped to inaugurate this year include Tokyo-Dairen and Osaka-Shanghai. The distances, estimated hours of flight, &c., of these routes are shown in the following table:—

Between.	Distance in kilometres.	Hours of flight.	Number of trips per week.	
			1st year of operation.	2nd year of operation.

Tokyo-Dairen route.

Tokyo-Osaka	425	2.50	12	12
Osaka-Fukuoka	.. ..	500	3.20	6	6
Fukuoka-Seoul	.. ..	550	3.40	3	6
Seoul-Dairen	.. ..	600	4.00	3	6
Total	.. ..	2,075 (1290 miles).	13.50	..	..

Osaka-Shanghai route.

Osaka-Fukuoka	500	3.20	3	6
Fukuoka-Shanghai	.. ..	950	6.20	..	..
Total	.. ..	1,450 (900 miles).	9.40	..	..

At the beginning of April, 1929, the first practical step towards the establishment of the Tokyo-Dairen route was inaugurated by an air service between Urusan (50 miles north-east of Fusan in south Korea) and Dairen. At present the service is being run three times a week in each direction, mails only being carried. The route is Urusan—Seoul—Heijo—Dairen, the total distance of about 600 miles being scheduled to occupy $6\frac{1}{2}$ -7 hours in the air, with one additional hour at intermediate halts. During the present experimental stage, Salmson machines taken over from the military authorities are being used, necessitating one change of machine at Seoul.

It is hoped that larger and more modern Fokker machines ordered from Holland will arrive in time to carry on the service in July and August, but until then the sea passage of about 160 miles between Urusan and Fukuoka (at the western end of the island of Kyushu) will not be attempted. Until these new machines arrive the mails are being taken by motor car from Urusan to Fusan, where they are placed on board the Government railway ferry-steamer which takes them to Fukuoka, whence they proceed by air to the aerodrome at Tachikawa, 27 miles outside Tokyo.

It is stated that the new Fokker machines will have accommodation for five passengers in addition to the mails.

It is too early as yet to form any opinion as to the success of the undertaking, the more so as the present Salmson machines are admittedly a mere makeshift. One of the principal difficulties is the deficiency of landing places. There is an adequate military aerodrome at Heijo, and the recently constructed aerodrome at Joito, near Seoul, is also now properly equipped. The latter, however, suffers from the risk of occasional flooding during the rains of July and August. Urusan is a mere landing ground without equipment. Emergency landing grounds between the regular halts do not yet exist, and until some more are provided it may perhaps be doubted whether the service can be carried on for long without undue wastage of machines.

With the exception of one or two purely experimental flights recently undertaken with Dornier Wahl flying boats the service from Osaka to Shanghai has not yet been inaugurated, but it seems likely that this will be the next route to come into regular operation.

THE IMPERIAL FAMILY OF JAPAN.

The mission of H.R.H. the Duke of Gloucester to Japan to confer the Order of the Garter on H.I.M. the Emperor has been the source of great gratification throughout the Japanese Army with which the Imperial Family of Japan is very closely connected.

The Emperor combines in his own person, both in peace and war, the supreme command of both the Army and Navy : the opening words of the Imperial rescript issued in 1882 begins : "Soldiers, I am your Captain-General."

The present Emperor, when he was proclaimed Crown Prince in 1902, was simultaneously commissioned a second lieutenant in the

Army and a sub-lieutenant in the Navy. He had attained the ranks of lieutenant-colonel and commander respectively when his father died in December 1926.

His brother, Prince Chichibu, Heir Presumptive to the Throne, is a lieutenant in the Army, and now a student at the Staff College.

Many of the Princes have reached high rank in the Imperial forces. At the present moment there are nine serving in the Army, headed by Marshal Prince Kanin and General Prince Nashimoto. General Prince Kuni, father of the Empress, died last January, being promoted Marshal on his death-bed. The ex-Crown Prince of Korea, who visited England in 1926, is a major and a Staff College graduate.

The present mission of the Duke of Gloucester is the fourth occasion in modern times that similar missions have been sent by Great Britain to Japan. The three previous missions were all headed by Prince Arthur of Connaught. In 1906 he went to confer the Garter on the Emperor Meiji; in 1912 he represented His Majesty the King at the funeral of that monarch, and conferred the Garter on the latter's successor, the Emperor Taisho; and in 1918 he went to present a British Field-Marshal's baton to the Emperor Taisho.

Other visits by members of the British Royal Family to Japan have been paid by the late Duke of Edinburgh, by His Majesty the King, by the Duke of Connaught, by the Prince of Wales in 1922, and by Prince George in 1925.

PORTUGAL.

NEW CHIEF OF THE GENERAL STAFF.

The vacant position of Chief of the General Staff of the Portuguese Army has been filled by General Amilcar de Castro Abreu E Mota, who up till recently was Quartermaster-General.

REORGANIZATION OF MINISTRY OF WAR.

1. *Abolition of Q. M. G. Department.*

Consequent on the recent abolition of the appointment of Quartermaster-General, the organization of the Portuguese Ministry of War has been considerably rearranged.

The following shows the main duties undertaken by the Directorates of the reorganized Ministry of War :—

Office of Minister of War.

All matters in which more than one of the Directorates are concerned. Uniforms. Decorations. Official publications. Correspondence with other Ministries.

1st Directorate (Adjutant-General).

Section 1.—Records. Honours and awards. Military Law and discipline. Prisons.

Section 2.—Promotions of officers. Register of officers on Active and Reserve Lists.

Section 3.—Other ranks. Records. Promotion and establishment.

2nd Directorate (Administration).

Section 1.—Purchase of material. Stores and supplies. Factories. Ordnance. Communications.

Section 2.—Railways. Telegraphs.

Section 3.—Pay. Accounting. Pensions. Claims.

Section 4.—Remounts and horse breeding establishments.

3rd Directorate (General Staff).

Section 1.—General Staff training. Training. Libraries. Courses. Regulations.

Section 2.—Military operations and intelligence.

Section 3.—Combined operations. International law. Mobilization of personnel and material.

Section 4.—National defence. Lines of communication. Reserves.

Attached.

1. Commission of Fortifications.
2. Railway Commission.
3. Air Commission.
4. Telegraphic Commission.

General Office Reparticao Geral.

Section 1.—Deals with all correspondence of 1st and 2nd Directorates. Pensions for widows and orphans.

Section 2.—Registry. Civil personnel.

Section 3.—Medical and chaplains.

Chief Inspectorate of Army Administration.

Visits to units and establishments. Verification of numbers of personnel, animals and stores. Recommendations for improvement of efficiency and to effect economy.

Higher Council of the Army.

(a) *Composition*.—Minister of War, Adjutant-General, Administrator-General and C. G. S. Directors of various arms and services. Commanders and regions.

(b) *Duties*.—The Council will be called at the discretion of the Minister of War to discuss important questions.

Accounting office.

2. *Summary.*

The principal changes are as follows :—

- (a) The 4th Directorate disappears and the duties of its four sections are distributed among the remaining three directorates.
- (b) The “Bureau of the Minister of War” assumes more responsibilities than formerly.
- (c) A General Office *Reparticao Geral* has been introduced, which will deal with all the correspondence of the first two directorates and in addition deal with the medical and chaplains department.
- (d) The “Superior Council of the Army” is also included in the new organization.
- (e) An accounting branch has also been added.

FORMATION OF NATIONAL AIR COUNCIL.

1. By the terms of a recent Official Decree, a National Air Council has been created in Portugal consisting of seven members and a secretary under the presidency of the Prime Minister.

Constitution.

2. These seven members of the Council will be nominated, one each, by the Ministers of Finance, Home Affairs, War, Marine, Foreign Affairs, Commerce and Communications, and the Colonies. The secretary, who will intervene and have a vote in the Council's decisions, will be chosen by the Ministers of War and Marine from amongst the higher officers in the military and naval aeronautical service. Appointments are to be for a period of six years, at the expiration of which three new members will be appointed. Thereafter, three fresh appointments will be made every three years.

Duties of Council.

3. The Council is to be the only body organized for the purpose of making reports on all matters connected with national aeronautics,

on which it is made obligatory that the Council shall be consulted. Its reports, prepared in whatever form is considered most advisable, are to be submitted to the Prime Minister who will lay them before the Cabinet.

1ST ANNIVERSARY OF THE PORTUGUESE GOVERNMENT.

1. *Statement by President of the Council.*

On the occasion of the above the President of the Council of Ministers, Colonel Vicente de Freitas, made an official statement on the policy of reconstruction on which the Dictatorship had based the legislation for the past year. He referred principally to the finance reforms and the administration of trade and the colonies.

The President also mentioned that measures had been taken to deal with certain political conspirators, and he concluded by adding that no change in the Government was likely to take place for some time to come.

ARMY FIELD TRAINING DURING 1929.

Military exercises will be carried out in all the military regions during the period 1st to 15th September.

Units of all arms with their corresponding services, will take part in these exercises, which will be carried out according to a simple tactical scheme.

Each exercise will take 3 to 5 days (complete periods of 24 hours).

To complete the establishment of the units in question, all available officers and serjeants not with their units, living in the region, will be attached.

The detachments will be commanded by colonels qualifying for promotion.

Manœuvres, covering a period of 6 days, will be carried out during the first fortnight of September in the Upper Alentajo. The scheme of these will be the action of a cavalry brigade of two regiments, supported by infantry and artillery in a covering and slow movement.

The cadets of the Military School of the last 2 years will also participate in the ranks, the last year cadets acting as subalterns, and the others as serjeants.

Both exercises and manœuvres will be preceded by *preparatory lectures*.

ROUMANIA.

CONDITION OF RAILWAYS.

The new Minister of Communications, General Alevra, made a general statement on the 15th February regarding the Roumanian railways. The following is a summary :—

At the end of the war the railways were badly disorganized, lines torn up, bridges destroyed and stations burnt. The newly acquired provinces lacked connection with the capital and ports of the old kingdom. Two things were specially necessary to remedy this state of affairs, a programme of reconstruction and funds. Since the Great War 15 million pounds sterling have been spent on railways, but there has been no programme of construction. As a result a great deal of machinery and stock have been acquired haphazard and subsequently left to rot. Certain new lines are now under construction, and although work was begun on these simultaneously for reasons of national defence, in future one line will be tackled at a time.

The Railway Department is to be gradually reorganized and surplus staffs dismissed.

Railways were efficiently run before the Great War, but since the war politics have been introduced into the sphere of railway administration, and as a result there has been a constant change of Director-Generals, with corresponding changes of system.

Reorganization is to be carried out largely in accordance with the proposals drawn up by a French expert sent out for this purpose last year.

SITUATION IN BESSARABIA.

Since the article in the last Journal on the subject of Bessarabia, there have been several rumours of unrest in the country. These have been run by the opposition press, who are trying to make capital against the new Government, and there is no doubt that Communist agitators have taken advantage of the raising of the state of siege in the country to create a certain amount of disturbance.

As a result the new Minister of War, General Cihoski, has just made a tour in the provinces, and on return has issued a statement to the press, of which the following is a summary :—

"I went on a tour of inspection on my own initiative with the object of finding out for myself on the spot what was the truth of the alarmist reports appearing in a section of the press.

My own enquiries were limited to the military sphere, and the result was very satisfactory. M. Ioanitescu (Under-Secretary of State at the Ministry of the Interior), who accompanied me, will report on the administrative and social spheres.

As far as concerns the Frontier Guards, I visited about ten picquets along the Dniester. I found them warmly clothed, with special arctic clothing, better fed than any other Roumanian troops, and with a new continuous telephone line which has much simplified their task. Their quarters are less satisfactory, and I have reported to Parliament on the necessity of putting up special buildings in cases where the men are billeted on the villagers.

As to moral it is excellent, and the troops themselves are the first to condemn the few recent regrettable cases of desertion. Bolshevik propaganda makes no headway, and will not be able to do so. Moral among the troops in the interior I found to be equally good. Relations between officers and men are excellent.

The housing of the troops in the interior, again, leaves much to be desired, and its improvement is an urgent necessity.

Relations between officers and civil authorities are very cordial.

My inspection was carried out at a time of great cold, yet I found that the interests of the service had not suffered, and the health of the troops is very good.

The Red Cross is doing admirable work in helping to feed the population, especially children and old people.

I conclude with quoting a typical answer which I received from civil and military officers, in reply to my enquiry as to the moral of the population. 'We are leading a quiet and peaceful life. It is only when we get certain Bucharest newspapers that we hear of troubles and disorders which are supposed to exist amongst us.' "

All our information agrees with General Cihoski's report, and while it is realised that times will be hard this spring on account of the failure of last summer's harvest, there appears to be no risk of any upheaval in Bessarabia. It is only to be hoped that the measures taken by the Government will be successful in preventing famine and providing employment for the peasants in the country.

SPAIN.

STATEMENTS BY GENERAL PRIMO DE RIVERA.

In a long statement in one of his official Notes to the Press, which have lately been numerous, General Primo de Rivera refers to what has been achieved by the Dictatorship during its $5\frac{1}{2}$ years of office. He says :—

“ It has put an end to the reign of ‘ fear ’ which existed in Spain. It has ended the Moroccan War, and brought on to a sound basis the public finances of the country. It has very greatly improved the roads. A most modern social organization has been brought in, and relations with America, of every kind, have been strengthened. Thousands of schools have been created ; municipal and provincial life has been rescued from decay ; the petrol supply has been nationalized. Good ships have been built and Spain’s defences have been strengthened . . . and other trifles . . .

But all this is nothing, and would be worth nothing, nor could it have been achieved unless the principle of authority had first been restored, authority which the Government intends to maintain, cost what it may, even in face of mistaken violence and threats. This is as conscientious Spaniards wish it to be, even those who have suffered, and they shall not be disappointed as long as I am head of the Government.”

SPANISH ARMY IN MOROCCO.

A new establishment of the *Tercio* (Foreign Legion) has recently been authorized by which the strength of the force will amount to 205 officers and 6,470 other ranks.

This shows a reduction of approximately 1,500 all ranks on the former (1925) establishment.

REDUCTION IN COST OF ARMY IN MOROCCO.

It is officially stated that, as a result of the recent reorganization of forces and military services, next year’s expenditure in Morocco will be reduced by 10 million *pesetas* (approximately £300,000).

UNITED STATES OF AMERICA.

WAR DEPARTMENT APPROPRIATION BILL FOR THE FISCAL YEAR, 1ST
JULY, 1929, TO 30TH JUNE, 1930.

1. The War Department Appropriation Bill for 1929-30 was finally approved and signed by the President on the 28th February. It carries a total of appropriations, military and non-military, of £94,600,000, which is an increase over the current year of £11,580,000.

2. For military activities the bill carries a total of £69,000,000, an increase over the current year's appropriations of £4,500,000.

For non-military activities there is provided a total of £25,500,000, an increase over the current year of £7,080,000.

In comparing the appropriations for the current year and those for 1929-30 it should be noted that a sum of about £4,000,000 was made available by the 2nd Deficiency Act passed on 29th May, 1928, so that actually the direct appropriations in the present bill exceed the sum of the current year by approximately £7,580,000 only.

3. The increase is mainly due to additional demands in the item "Pay of the Army," to construction at military posts, to the Army Air Corps, and to certain non-military activities including £2,000,000 for the purchase of capital stock of the Inland Waterways Corporation. The greater part of the increase is in non-military appropriations.

4. There is a decrease in almost every activity of the Ordnance Department with the exception of the construction of six to eight light tanks "of a newly developed and quite superior type." This is reputed to be the initiation of a programme to provide the army with a reasonable number of these weapons.

5. The appropriation bills for the last three years and the coming year show a distinct upward trend in expenditure upon purely military activities, namely :—

			£
1926-27	..	..	56,000,000
1927-28	..	..	61,000,000
1928-29	..	..	64,500,000
1929-30	..	..	69,000,000

YUGO-SLAVIA.

THE ARMY OF 1929-30.

Estimates were prepared for presentation to the Financial Committee of the Skupstina before King Alexander's *coup d'etat*, but it is now not known whether the figures are to be adopted as they stand. However, the figures gave an estimated increase of 121½ million dinars over the total for the previous year. Noticeable items making this increase are :—

Rations and forage.—Increase of 25 million dinars, mainly caused by increase of numbers of animals.

Barrack construction.—Increase of 48 million dinars.

Aviation.—Increase of 28 million dinars for construction and improvement of aerodromes.

Artillery technical service.—Increase of 16 million dinars for construction and completion of arsenal at Kraguevac and workshops throughout the country.

Navy.—Increase of 13 million dinars devoted to no special item but a general increase all round.

The item of 400 million dinars occurs again this year without any specification of its purposes except as “By decision of the Council of Ministers.” It is presumably to be expended on the purchase of war stores.

There is a decrease of 13 million dinars in the estimate for the Frontier Troops, which consists mainly of a reduction in pay and allowances.

For 1929-30 the total strength of the army is estimated at 7,052 officers, 105,599 other ranks and 5,132 students. The navy is to have 390 officers, 4,966 other ranks and 703 students ; while the frontier troops are to have 86 officers, 5,114 other ranks.

The totals for the army and navy show a slight increase while the frontier troops are slightly reduced.

CORRESPONDENCE.

PRO PATRIA MORI.

SIR,

In the Editorial notes of the July, 1929, issue of this Journal, appears the following paragraph :—

“ One of the chief objects of the League of Nations is the elimination of war. It seems, therefore, that if the League succeeds in attaining this object, patriotism, as we know it, will tend to disappear. Is there anything that can really take its place? The mind gropes for possible substitutes, and, looming in the dim distance, though still obscure, the twin thoughts of “brotherhood” and “love of humanity” appear.

Patriotism, it is true, is an abstract notion, but it is based on something that is definitely concrete—one's native land. Can the same be said of “brotherhood” and “love of humanity”? ”

The suggestion is that the ideal aimed at by the present League of Nations is the universal brotherhood of man. Many appear to believe such a state possible.

In the present state of the world the division of man into groups is by countries. The population of each country is further sub-divided into political groups; each with their own ideals. Again, each of these political groups is sub-divided into smaller groups; extremists at either end of each main party and the centre, and these again and again are sub-divided.

The population, again, is divided into large “class” groups, each of which is again sub-divided. Striking across both of these main divisions of the population are again the divisions and sub-divisions of religion. These last being stronger in some countries than others.

In fact, the human animal is a gregarious creature, but being endowed with reasoning power each one has his own views on every possible question, so that no two think exactly alike. In that, we have the whole cause of these divisions and sub-divisions.

Any attack threatening any particular division or sub-division, closes up its ranks to face the danger. The main sub-division of the world being by countries, any great danger threatening a country

unites the nation to meet it, and the smaller differences disappear for the time. Prolong that danger until it begins to appear, not a temporary state of emergency, but the normal habit of life and the divisions and sub-divisions begin separating again. The last war very thoroughly exemplified this both in Great Britain and other belligerent countries.

So it happens with any other of the big divisions of the people, and if one thinks back there are any number of examples proving it.

If patriotism (resulting from the present division of the world population) is taken away, the Editorial asks what will take its place.

There are two great forces now at work splitting up the Nations—Class and Religion.

In some "Class" holds the greater sway, in some "Religion."

Postulating that such a thing were possible as to abolish patriotism, is it not obvious that the "Universal Brotherhood" will be traversed by class and religious differences; deepening into hatred.

What a world! May the time never come when national ideals, based on national characteristics and birth, give way to polyglot conglomerations of men with different traditions, outlook and characteristics, without the steadying influence of a Homeland. There are a few such in the world to-day, by whose actions and avowed intentions we may judge the probable results of such a world state—the cosmopolitan, or international communist. A League of Nations is a wonderful ideal well worth striving for. But a "league of nations" is not the disruption of the nations into a universal brotherhood of man, but the bringing of all nations together into a brotherhood of nations, who retain their own characteristics and patriotisms. The ideal will be a federation of all the nations, with some form of central body which will adjust differences and keep international rivalry on a friendly basis, and which will take a world wide view and guide the nations for the benefit of the whole world population. Then we will be able to retain, perhaps in a somewhat emasculated form, the great character builder Patriotism.

Yours faithfully,

Kendal Franks,

Lieutenant-Colonel.

REVIEWS.

THE DECISIVE WARS OF HISTORY.

By

CAPTAIN B. H. LIDDELL HART.

(Messrs. G. Bell & Sons, London, 1929). 12s. 6d.

This brilliant study of the art of strategy deserves to be read and re-read by all soldiers, junior and senior.

The theory that Captain Hart sets out to prove is that "throughout the ages *decisive* results in war have only been reached when the approach has been indirect. In other words that, in strategy, the longest way round is the shortest way there."

In order to afford the broadest possible basis for testing his theory, the author surveys the course of the nine wars which decisively affected European history in ancient times and the eighteen major wars of modern history.

He points out that these twenty-seven wars embrace 240 campaigns, in only 6 of which was a decisive result obtained by a direct strategic approach on the main army of the enemy. Analysing this phenomenon, he says that if a certain effect is seen to follow a certain cause in a score or more cases, in different epochs and diverse conditions, there is ground for regarding this cause as an integral part of any theory of war.

Nor do we find that the author overstates his case. Of necessity, in such a vast survey, the history of each campaign is ruthlessly pruned and only the salient facts produced. Yet, in sober terms, sufficient information and fact is given for the reader to form his own conclusions.

"In war as in wrestling," says the author, "the attempt to throw the opponent without loosening his foothold and balance can only result in self-exhaustion. Victory by such a method can only be possible through an immense margin of superior strength in some form, and even so tends to lose decisiveness."

It should be noted that Captain Hart does not deny that the direct approach may achieve some results; his contention is that it rarely leads to decisive results. As an example, he demonstrates how in 50 B. C. Caesar, by an excess of energy in pursuing Pompey (the direct approach) forced the latter to withdraw across the Adriatic, thus denying himself the chance of ending the war at one blow and condemning himself to four more years of warfare.

To come to more recent times, Plan XVII and the German plan of 1914 demonstrate the theory of the direct *versus* the indirect approach. Other notable examples of the latter are the German submarine campaign and the Dardanelles. There is no doubt that submarines nearly brought England to her knees ; whereas, regarding the much criticized Dardanelles campaign, the actual must not be confused with the potential results, if the principle of concentration of force had been followed in the beginning.

We confess that we heartily agree with the author in his main thesis. The "ultimate military aim in war" is surely *not* "the destruction of the enemy's main forces on the battlefield ;" it is the destruction of his powers of resistance—a very different matter and a corroboration of the theory advanced by Captain Hart. This, we consider, applies far more in these days when military power is based on economic endurance, than in past times when armies could live on the country and the weapons of war were not so complicated. In modern campaigns the whole nation is involved in the war, and to-day financial, diplomatic, commercial or ethical pressure against the "Home front" appears to afford a method of indirect approach—in fact an extension of the theory of striking at the enemy's flank or communications rather than directly at his front. "The true aim in war is the mind of the hostile rulers, not the bodies of their troops ; the balance between victory and defeat turns on mental impressions and only indirectly on physical blows."

FURTHER ASPECTS OF MECHANIZATION

By

BRIGADIER-GENERAL H. ROWAN-ROBINSON, C.M.G., D.S.O.

(*Messrs. William Clowes, Ltd., London, 1929.* 6s.

At the outset we may state that we find ourselves much more in agreement with the ideas expressed in this, the author's third book on modern military development, than in the two earlier volumes which have already been reviewed in these pages. We are glad to see that the author "takes off his coat" to his critics and in scathing terms denounces the "numbing conservatism" of the Army ! We appreciate a good fighter and we will also be frank in our criticism.

Once more we stand astounded at the author's fluent pen and at his capacity to ignore all difficulties which obstruct his theories, while magnifying isolated examples to prove his theses.

It seems that the author still fails to grasp two fundamental points:—

- (i) that the physical conditions of war on the ground are totally different from those on the sea or in the air ;
- (ii) that, apart from any other consideration, the difficulty of manufacture, supply and finance rule out the possibility of a wholly mechanized army.

Many of the author's contentions would be true if the surface of the earth were flat and unadorned with such annoying (from the M. T. point of view) phenomena as rivers, woods, swamps, rocks, etc. For instance he says "Did steam introduce no change into the methods of naval warfare?" But there is no close analogy between the effect of steam on the navy and of the internal combustion engine on the army, owing to the difference in the elements on which each arm moves.

Questions are occasionally asked in Parliament and surprise expressed at the number of men and the amount of money required to maintain one aeroplane in the air. It is not realised that the same holds good as regards mechanical vehicles, particularly the specialized natures such as tanks. We do not know if any estimate has ever been made or whether any data on the subject exists, but even a slight consideration of the facts shows that mechanical vehicles are voracious of man power. Apart from the crews and the administrative personnel of the unit (to fight 48 tanks requires 569 personnel), there are the various repair workshops, the spare part and store replacement depôts, the training establishments for teaching driving, shooting and the specialist trades, the factory hands at Home, etc., etc., to name but a few of the human beings that contribute directly to its maintenance. Therefore the maximum number of mechanical vehicles which can be maintained at any one time by a nation is distinctly limited.

Moreover, in addition to the above considerations, as we have previously stated, the varied nature of our Imperial liabilities and of the ground on which the British Army may be called on to operate, definitely precludes our army being wholly mechanized.

The above is entirely borne out by the remarks of the C. I. G. S. at the close of the training season of 1927 that "in the future we should have infantry and cavalry divisions—both brought up-to-

date by motorization and the addition of armoured units—and armoured divisions.....the armoured force should be regarded as a separate force, not as part of the existing divisions.”

We may make one further remark before we turn from the author's basic misconceptions. Is it not strange that *all* nations have much the same views as Great Britain? The author may be right when he says “the General Staff is our weak point. We put our best men there.....” (!), but surely all the framers of army policy in all the nations cannot be fools. The author is apparently in the position of the Irish juryman who, finding himself in a minority of one, said “Eleven more obstinate men I niver saw.”

There are some interesting paragraphs on motorization *versus* mechanization, and the American General Staff are quoted as stating that “advances in motorization have made possible and advisable the restoration through mechanization of the element of movement and surprise, which before the world war was only operative through cavalry”—an excellent epitome of the general opinion, we think.

We agree with the author that democracy will continue to dominate military organization in the political sphere and it is, to our mind, a considerable danger. Party leaders are inevitably swayed by party considerations, often against their better judgment. One can conceive a government in the future fatally endangering the safety of the realm owing to pressure from its ignorant and uneducated supporters. It therefore behoves soldiers to educate the civil population in the elements of the profession of arms and to make them realise that both are equally concerned. This political phenomenon, however, will act more and more to the advantage of Great Britain, for, the more the continental armies are reduced in size, the stronger relatively becomes our own; also our manufacturing power confers a distinct potential advantage compared with less industrialized nations.

Brigadier-General Rowan-Robinson points out very clearly the unreality of manœuvres compared with real war and we agree that this is even more so in this motorized age. No doubt more reality could be produced on occasions, but this in any event must fall far short of actual war—and “half a loaf is better than no bread.” Even if the “stage” for manœuvres were all England,

it is doubtful whether more lessons would be learnt, owing to the unreality of *other* attendant circumstances.

Really the author ought to be more sure of his facts before writing "on the Indian frontier.....with the Lewis gun.....covering fire is but seldom feasible"! also when he states "the policy of India, under the urge of the War Office (*sic*), is now that of a slow (*sic*) movement towards partial mechanization." We have heard murmurs that India is proceeding too fast along this path.

We feel that the matter of the supply of a small mechanized force from the air, though imaginative, is well within the realm of possibility. In this connection the author makes some interesting calculations in Chapter X. In the case he outlines, 520 lorries occupying $8\frac{1}{2}$ miles of road space are required—obviously an impossible convoy to move through a hostile country on an independent mission. These figures give furiously to think. The main difficulty we see as regards supply by air is landing grounds; perhaps, however, by an improvement or development in the "slotted wing" device, aeroplanes will be able to land at very low speeds without "stalling" and as a corollary, possible landing grounds will become far more numerous.

Taking this book as a whole, it is quite readable. There are many good ideas and much sound reasoning. The picture, however, is continually spoilt every few pages by some impossible statement or fantastic imagery. Frankly we prefer the old masters to this somewhat impressionist daub.

ARMY HEALTH IN INDIA.

By

LIEUT.-COLONEL JOHN MACKENZIE, M.A., M.B., CH. B., D.P.N., R.A.M.C.

(Messrs. John Bale, Sons and Danielsson, Ltd., London.) 10s. 6d.

This book appeared first as a series of articles in the *Journal of the Royal Army Medical Corps*.

From his position as Director of Hygiene and Pathology at Army Headquarters in India, the author occupied an unique position

from which to compile this work. He has taken the fullest advantage of it and is to be congratulated on the result.

He brings out the tremendous contrast in the wretched outlook as to health of the British soldier in India of John Company days, and of the period immediately after, with the comparatively good health of the British soldier of to-day—the result of the inauguration and the improvements in hygienic measures. This must convince even the most sceptical of the great benefits of an efficient hygiene service.

The author also shows us how very far we have yet to travel before we bring the health of the soldier up to a really satisfactory standard. He points out the road along which we may reach this goal and it is an eminently practical one.

The book is a good one, well and concisely written as might be expected of the author. Apart from an obvious printer's error, the only criticism the reviewer would offer is, that the financial effect of the recommendations forecast by the author is, to say the least, a little too optimistic.

The book can be thoroughly recommended to *all* officers to read and especially to young officers just joining the service. It should act as a stimulus to one and all to renewed effort to reach for the British soldier in India that high standard of health, which it is possible to attain, and let it stand as an example for all the world to follow.

ARMAMENTS YEAR-BOOK, FIFTH YEAR, 1929. GENEVA, LEAGUE OF NATIONS.

This publication might be termed the "Statesmen's Year-Book" of the fighting forces of the world. It has increased in practical value each year; and the 1929 volume, though enlarged to nearly 1,100 pages, is quite a handy book owing to the use of thinner paper.

It is of course impossible to "review" this year book in a comprehensive manner, since it is intended not to be read but to be referred to. Instead, I will try to give some indication of its contents. It "contains monographs on 60 countries, both members and non-members of the League of Nations. In the case of countries which

possess colonies and colonial forces, the monographs also give detailed information on the organization and composition of those forces.” These monographs abound in lucid graphs and statistical tables; and of these, excellent as they are, an even more extended use would I think be an improvement in years to come. (For example, the useful comparative diagrams of naval strengths in 1913, 1919 and 1928 which are provided for most countries are lacking in respect of the United States navy, for no apparent reason.

The particulars regarding each country's forces are set out generally under three main headings:—

1. $\left\{ \begin{array}{l} a. \text{ Army, (including Air Force).} \\ b. \text{ Navy.} \end{array} \right.$
2. Budget expenditure allotted to national defence.
3. Raw materials and different products of importance for national defence.

The countries are arranged alphabetically. Amongst those of which no details appear I note Afghanistan, Iraq and Palestine.

In an endeavour to check the accuracy and utility of this book, I read through the section on India with some care. I can only describe it as very good indeed. It is distinguished by extreme conciseness, and is up-to-date—too much so, alas! for it has particulars of the “Royal Indian Navy.” To India are allotted about 27 large octavo pages, which gives an idea of the scale of the compilation. Mistakes are few but are not entirely absent—on page 218, for example, the Rawalpindi District is altogether omitted from table of commands, &c.

In my judgment, this year book should find a place in all brigade and district libraries, for as a work of reference it must be of assistance to every officer preparing himself for the Staff College Examination. The account of the post-1925 organization of the Soviet Army, for example, contains a mass of information which is not readily accessible elsewhere.

OFFICIAL HISTORY OF AUSTRALIA IN THE WAR OF 1914-18.

VOLUME III. THE A. I. F. IN FRANCE 1916. BY C. E. W. BEAN

(*Angus and Robertson, Ltd. Sydney 1929*). 21s.

In this volume of the Australian History, the author has endeavoured to describe not only the actual operations in which the

A. I. F. took a part, but also the further development of that Force in fighting efficiency, and the reactions and responses of the men composing it to the experiences they underwent.

To this end, the accounts of operations are more of the detailed nature usually associated with regimental histories, and great attention has been paid to recording the parts played by individuals of every rank.

Such attention to detail renders it difficult at times, to obtain a clear picture of an operation or even of a single days fighting. Similar criticism has already been levelled at the previous volumes, and the author has included in his preface a defence of his method and an explanation of his reasons; such as his preference for the collection and co-ordination of the accounts of individuals of all ranks, rather than the placing of greater reliance on official reports and despatches. He has obviously taken great pains to collect such accounts and appears to have been most successful in obtaining accurate details and eliminating exaggerated reports.

On account of the detailed accounts of the achievements of individuals, the volume should have a wide appeal to the Australian public and foster their pride in the record of their Forces.

This volume covers the period from the arrival in Egypt after the evacuation of Gallipoli to the end of 1916. It opens with an account of the difficulties experienced in the early months of 1916, in re-organizing the troops who had returned from Gallipoli; absorbing the very large drafts waiting in Egypt, and the ensuing expansion of two divisions to form four. Officers and technical personnel had to be found or trained in almost record time with the minimum of trained instructors, but by hard work and enthusiasm all difficulties were overcome.

Differences with the higher command in Egypt and in England, are also touched on, including those which arose from the determination of the Australian Government to have Australians appointed to the command of brigades and ultimately divisions, which point they finally gained. The discipline of the Australian troops at this time, of which much has been said, is also discussed. The lack of class distinctions, and the democratic political system of Australia

are given as reasons. Much however, he puts down to lack of understanding of the real necessity and with greater experience came much improvement, although it is probable that the precise system in the Australian Forces will always be somewhat different from that of the British Services.

The earlier days in France with their successes and also the failures, due to ignorance and lack of experience in trench warfare, are very fully described. The most elementary details of trench life and of small operations such as raids are given, and are of value in showing the importance of attention to detail in determining success or failure.

This is followed by an excellent account of the disastrous operation at Fromelles on 17-19th July 1916, in which the new 5th Division saw its first fighting as a division and suffered 5,300 casualties; ultimately having to come back to its own lines. Little was published of this operation at the time, but when the news reached Australia it created much feeling, and in the search for a scapegoat, public opinion and the Press fastened on the Divisional Commander who was not popular on account of previous incidents for which he had been blamed. In his account, the historian completely vindicates this commander and quotes his case as an example of the unfairness of popular verdicts formed in such circumstances. Judging by the reports in Australian papers this has caused a complete reversion of feeling and they are now endeavouring to make amends.

Then come very detailed accounts of the successive attacks on Pozieres and Mouquet Farm. These are given at great length and the author admits that he will not be able to continue this system in accounts of later battles. As accounts of the work of small parties and individuals they are excellent, but a general view is difficult to obtain. The difficulties of fighting in the Somme area are very vividly brought out.

The move north to the Ypres Salient and the recall to the Somme for the operations about Flers are then described. This was the worst period of the year for the A. I. F. The men resented being brought back to the Somme after only a short rest, but having arrived there, they set to again, to do their best. But it was a

severe trial. They came through successfully but the effects of the strain were very marked and many reached the limits of their endurance.

There are appendices dealing with the Sollum Expedition at the end of 1915, in which Australians took part, and with the action of the Light Cars in the Libyan Desert. The volume contains eight maps which might with advantage have been made to fold clear of the pages.

In addition, there are numerous small sketches inset in the text to illustrate the descriptions of actions. These are often most useful, but many are so "sketchy" and diminutive that unless the reader has personal knowledge, it is doubtful if they are of as much value as a smaller number of larger sketches would have been. The book is excellently produced and is well worth reading, not only as the history of the A. I. F., but also as a detailed study of the manner in which the aims and plans of the higher commanders were executed by the actual junior leaders and fighting troops, and of the difficulties they overcame by sheer determination to play their parts to the end.

AN ENGLISH-PUNJABI DICTIONARY.

By REV. CANON W. P. HARES, B.A.

(*The Civil and Military Gazette, Lahore.*) Rs. 5/-.

The Revd. Canon W. P. Hares' English-Punjabi Dictionary (in Roman Script) is a valuable addition to the scanty stock of Punjabi literature. The learned author has realised two important facts, viz. that with the spread of education in the Punjab many pure Arabic, Persian, Hindi and Urdu words have been incorporated into the Punjabi language and that Punjabi is not merely the language of the Sikh community but is also the language of the Hindu and Musalman residents of the Punjab. It is for these reasons that he has not restricted himself in his dictionary to words of the 'Durbar Sahib' but has freely incorporated words used by the other two communities.

“NAPIER’S RIFLES.”

BY H. G. RAWLINSON.

Oxford University Press (Indian Branch) Rs. 10/- nett.

This regimental history, coming from a practised hand, is a more coherent narrative and of a higher literary standard than most of its class. The battalion did well to secure the services of Mr. Rawlinson to crystallise their traditions : he is a well-known historian and principal of the Deccan College at Poona. His story, though disfigured by a number of minor slips (of which more later), is a valuable addition to the long shelf of Indian regimental histories.

The services of Napier’s Rifles have been varied and extensive. Full accounts of their exploits in Scinde, Central India, Abyssinia, Burma, France, Mesopotamia and Palestine find a place here ; though the present record stops short of the Waziristan campaign and does not treat of the services of the 2/125th. The chapters dealing with the last Mahratta war and Sir Charles Napier’s astonishing feats in Scinde are important, as a considerable amount of hitherto unpublished or uncollated material has been used ; whilst the story of the final advance in Palestine owes much to Captain Rees’s vivid and lucid diaries. These chapters are of real interest to the general reader.

The internal affairs of the regiment receive less notice than is usual in such works. Apart from two illustrations, little is to be learnt regarding the uniform at various periods ; and I have not found any mention of the “1st Extra Battalion” colours or—what indeed would be too much to expect, for I believe it to be insoluble—any solution of the mystery attaching to the existence of *two* sets of these flags, one still in the possession of the regiment and the other in St. Mary’s Church at Poona.

It is a matter for regret that the record of a distinguished regiment, compiled by a distinguished historian and published by a distinguished Press, should be disfigured by errors which though they may be individually trivial are in the aggregate a blemish. A few examples : the Fuleli river, crux of the battle of Meanee, is not named on the map of that engagement facing page 32 ; the title of the 105th Mahratta L. I. is misspelt on page 102 ; an officer’s decorations are, contrary to all practice, twice given as “M. C., D.S.O.”, at pages vii and 181. Ahirs must certainly not be ranked

with Chamars, as has been done at page 71—this is an injustice to a martial class which to-day furnishes several hundred members to the Indian Army. The index is quite inadequate: for instance, references to Dapuri are given at pages 6 and 11, but pages 7 and 185 are ignored; “uniforms” and “colours” are omitted. There is no such body as the “Council of Army Historical Research” (page vii, and plate facing page 59): presumably the Council of the *Society* of that name is referred to. Sufficient care has not been taken to distinguish between units of the Bombay and Bengal Armies, respectively: cf. pages 68, 77 and 78.

The book is well produced as regards printing and binding, and the half-tone illustrations are fairly well done. The price is reasonable.

PRACTICAL HORSEMANSHIP.

BY CAPTAIN J. L. M. BARRETT.

(Messrs. H. F. & G. Witherby.) Price 12/6.

This book deals principally with the training of the man rather than the horse and gives a very sound and practical system to be followed.

The system advocated is very clearly explained and neither the novice nor the more experienced horseman can fail to benefit by studying the principles which the author has so clearly stated.

The various “Aids” for teaching the horse Balance and Collection are also given and should be of the greatest value to any reader who has to train or retrain a horse.

The illustrations are excellent and clearly show the points brought out in the text.

I cannot agree with the author that “Getting the tongue over the bit” is not a serious fault, as most polo players know how soon a horse’s mouth becomes dry and the horse as a result pulls if this fault is not remedied.

This book can confidently be recommended to all who wish to improve their horsemanship and so obtain the best from their horses and increase their own enjoyment in riding.



LLOYDS BANK Limited.

(Incorporated in England.)

Subscribed Capital	£ 73,302,076
Paid-up Capital	£ 15,810,252
Reserve Fund	£ 10,000,000

Head Office:

42, GRACECHURCH STREET, LONDON, E.C. 3.

Eastern Department:

14, KING WILLIAM STREET, LONDON, E.C. 4.

West End:

6, PALL MALL, LONDON, S.W. 1.

GENERAL BANKING & EXCHANGE BUSINESS
of every description transacted.

**WORLD LETTERS OF CREDIT AND TRAVELLERS
CHEQUES PAYABLE THROUGHOUT THE WORLD.**

Foreign Currency Drafts, Telegraphic & Mail
Transfers.

**SAVINGS BANK ACCOUNTS—INTEREST @ 4%
PER ANNUM—WITHDRAWABLE BY CHEQUE.**

Over 1800 Offices in England & Wales.

Agents & Correspondents throughout the World.

Branches in the East:

BOMBAY, CALCUTTA (2 Offices), KARACHI,
RANGOON, DELHI, SIMLA, LAHORE,
RAWALPINDI, MURREE, SRINAGAR,
GULMARG AND NEW DELHI.

Thos. Cook & Son, Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Passages engaged by all lines at same fares as charged by Steamship Companies. Holders of Cook's tickets met at all ports. Outward passages engaged and tickets supplied from any part of the world to India. Usual reductions obtained for Missionaries, Railway Officials, Families, etc.

Baggage received, stored and forwarded. Cargo shipped to all parts of the world at current rates. Inward consignments such as Hardware, Piecegoods, Machinery Stores, etc., for Messes and Clubs, cleared and forwarded at special rates. Insurance of all kinds effected on Baggage, Cargo, Livestock, Mess Property, etc.

The Oriental Traveller's Gazette containing sailing dates and fares of all steamers, together with invaluable information for travellers, sent post free on application.

Government Certificates accepted. No deposit required.

Thos. Cook & Son (Bankers), Ltd.

(INCORPORATED IN ENGLAND.)

*Head Office : BERKELEY STREET, PICCADILLY,
LONDON, W. 1.*

Current and Fixed Deposit Accounts opened. Interest allowed. Pay and Pensions collected. Periodical remittances made at current rates. Insurance premia paid.

Letters of Credit and Traveller's Cheques issued, encashable throughout the world.

Drafts granted and Telegraphic Transfers effected on all principal towns.

Insurance Life, Accident, Fire, Burglary, effected. Prospectus on application.

160 OFFICES THROUGHOUT THE WORLD.

EASTERN OFFICES : BOMBAY, BAGHDAD, DELHI, SIMLA,
CALCUTTA, RANGOON, MADRAS, COLOMBO, SINGAPORE.



E. DUCKETT & Co

(By Government Appointment)

EAST STREET POONA

MONUMENTAL SCULPTORS

POWER MACHINERY & TOOLS

ARTISTIC MEMORIALS IN SELECTED

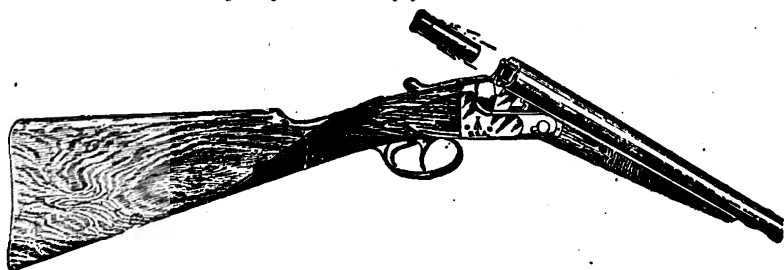
MARBLE ERECTED ANYWHERE IN INDIA

ELAHEE BUKSH & Co.,

ARMS AND AMMUNITION DEALERS,

== **MEERUT AND KASHMERE GATE, DELHI** ==

By Special Appointment



To H. E. the Earl of Reading, Viceroy & Governor-General.

LARGE STOCK OF

**Latest Model Shot Guns, Rifles, Pistols, Revolvers
and Ammunition.**

CHEAP AND RELIABLE

Shot Gun Cartridges ! A Speciality !! Record Sale !!!

Illustrated Catalogue Free

A useful compendium of information for all who have interests in Asia.

£ 1

ASIATIC REVIEW

5s.

per annum

per issue.

Each issue contains nearly 200 pages and is generally illustrated.

THE VERDICT OF THE PRESS.

ENGLAND. *The Times*: "The January issue brings that quarterly to the fortieth year of its steadfast devotion to the mission of providing a platform for information and opinion on Asiatic affairs—political, social, literary, educational, commercial, artistic and general.....many eminent names appear in the list of contributors."

U. S. A. *New York Tribune*: "A well-informed quarterly dealing with Oriental affairs."

FRANCE. *Les Dernieres Nouvelles* (Strasbourg): "La grande revue de Londres."

INDIA. *Bombay Daily Mail*: "Of special interest as affecting existing trade relations."

The following articles on India were published in the Review during 1927:—

India at the Imperial Conference by THE MAHARAJA OF BURDWAN.

The Indian Co-operative Movement, by SIR LALUBHAI SAMALDAS.

Rural India and the Royal Commission, by SIR PATRICK FAGAN.

*Post and Telegraph Work in India, by SIR GEOFFREY CLARKE.

*Indian Forest Administration, by W. F. PERREE.

*India's Cotton Problem, by H. A. F. LINDSAY.

*The Indian Navy, by P. R. CADELL.

*Lectures delivered before the East India Association.

THE REVIEW PUBLISHES IN FULL

THE PROCEEDINGS OF THE EAST INDIA ASSOCIATION.

NEW FEATURES:—

1.—THE ASIAN CIRCLE.

A SURVEY OF ASIATIC AFFAIRS.

(Published by arrangement in the *Asiatic Review*).

THE ASIAN CIRCLE is conducted by a group with personal knowledge of the various parts of Asia, and through the collective experience of its members aims at giving to the public an informed, progressive, and disinterested view of Asian affairs, both in detail and as a whole. Its membership includes:

The Right Hon LORD MESTON, K. C. S. I. (President).

SIR GEORGE BOUGHEY.

SIR PATRICK FAGAN, K. C. I. E., C. S. I.

SIR JOHN CUMMING, K. C. I. E., C. S. I.

Lieut.-General SIR GEORGE MACMUNN, K. C. B., K. C. S. I., D. S. O

2.—NETHERLANDS. (INDIES SECTION)

ARTICLES by expert writers on Java and Sumatra.

3.—FRENCH COLONIES.

Special contributions concerning Syria and Indo-China.

4.—THE INNER EAST.

(Record of Events in Central Asia).

How to obtain THE ASIATIC REVIEW.

(41st year of Publication).

Please use this SUBSCRIPTION ORDER FORM

To EAST AND WEST, LTD.,

3, Victoria Street, London, S. W. 1.

DATE.....

Please send THE ASIATIC REVIEW for Twelve Months, beginning

with.....to.....

for which I enclose equivalent of £1 (One Pound Sterling).

(Please write full name and address distinctly).

By Appointment to
THE LORD IRWIN,
VICEROY & GOVERNOR-GENERAL
OF INDIA.



By Appointment to
H. M. THE KING.



By Appointment to
H. R. H. THE PRINCE OF WALES.

RANKEN & Co., Ltd.,

SIMLA, DELHI, LAHORE,
RAWALPINDI & MURREE.

ESTABLISHED IN CALCUTTA 1770.

CIVIL & MILITARY TAILORS,
GENTLEMAN'S OUTFITTERS,
AND BREECHES MAKERS.

ESTIMATES SUPPLIED FOR
FULL-DRESS AND MESS DRESS
UNIFORMS OF ALL REGIMENTS.

By Appointment to
H. E. Field Marshal Sir William R. BIRDWOOD, Bart.,
G.C.B., G.C.M.G., K.C.S.I., C.I.E., D.S.O.,
Commander-in-Chief in India.

COX & KINGS

(AGENTS) LIMITED,

BOMBAY,

CALCUTTA, KARACHI, RAWALPINDI.

TELEGRAMS : " COXSHIP. "

SPECIAL OFF SEASON FARES TO ENGLAND

**INSTEAD OF GOING TO THE HILLS
SPEND YOUR SHORT LEAVE AT HOME**

FULL DETAILS ON APPLICATION

IF YOUR LEAVE IS DUE

WRITE NOW TO

COX & KINGS

(AGENTS) LIMITED,

GENERAL PASSENGER, FREIGHT

AND

CLEARING AGENTS.

HEAD OFFICE—13 REGENT ST.,

LONDON, S. W. 1.

BRANCHES AT—

**LIVERPOOL, SOUTHAMPTON, MARSEILLES,
ALEXANDRIA—PORT SAID, CAIRO, JERUSALEM.**

**AGENTS AND CORRESPONDENTS THROUGHOUT
THE WORLD.**

GS

DE

ON

D

JOURNAL

OF THE

United Service Institution of India.

INDEX

VOL. LIX.

January—October, 1929.

Published under the Authority of the Council.

LAHORE :
PRINTED BY E. A. SMEDLEY AT THE "CIVIL AND MILITARY GAZETTE" PRESS.

1930.

Journal of the United Service Institution of India.

Vol. LIX—1929.

CONTENTS.

	Page.
ARMY NOMENCLATURE	155
By "Simplicitas."	
BLOCKADE	451
By A. Mills.	
CAMPS OF EXERCISE, SIDELIGHTS ON—	41
By F. C. M.	
CHANNEL TUNNEL, GREAT BRITAIN AND THE—	158
By Major T. J. Ponting, M.C.	
CHITRAL, A FLIGHT TO—	5
By Lt.-Col. G. M. Routh, C.B.E., D.S.O.	
COMMISSIONS AND COMMAND	335
By Captain H. Bullock.	
CORRESPONDENCE	{ 78, 265, 412, 547
COURT-MARTIAL, EVOLUTION OF THE—	11
By Captain H. Bullock.	
CROMWELL'S LESSONS TO POSTERITY	305
By Captain A. L. Pemberton, M.C.	
EDITORIAL	{ 1, 113, 271, 425
EDUCATION IN THE INDIAN ARMY	447
By "A Commanding Officer."	
ESSAYS, GOLD MEDAL PRIZE ESSAY, 1928—2ND PRIZE..	23
By Major J. Mc L. G. Taylor.	
FIRE POWER IN AN INDIAN INFANTRY BATTALION ..	45
By Major K. F. Franks, D.S.O.	

	Page.
GALLIPOLI, THE EVACUATION OF—	288
By Bt.-Lt.-Col. H. E. Crocker, C.M.G., D.S.O.	
GILGIT, BY AIR TO—	182
By Col. J. F. Turner, D.S.O.	
GOVERNMENT OF INDIA, THE EVOLUTION OF THE— ..	324
By Captain A. G. Fuller.	
HISTORIES, INDIAN REGIMENTAL—	483
By "Hyderabad."	
INDIAN ORDNANCE FACTORIES, NOTES ON— ..	469
By Lt.-Col. C. S. Tute.	
INFANTRY.—	
THE DECLINE OF THE OFFENSIVE SPIRIT IN— ..	151
By "An Infantry Soldier."	
THE EVOLUTION OF THE INFANTRYMAN'S WEAPONS	216
By Lieut. R. G. Thurburn.	
LIFE ASSURANCE, AN AMATEUR'S NOTES ON— ..	33
By Lt.-Col. G. M. Routh, C.B.E., D.S.O.	
MECHANIZATION, A DISCUSSION ON THE OFFICIAL HAND-BOOK OF—	430
By Lt.-Col. G. Le Q. Martel, D.S.O., M.C.	
MILITARY ADVENTURERS IN INDIA—BENOIT DE BOIGNE	441
By C. Grey.	
MILITARY LAW, NOTES ON THE NEW MANUAL OF— ..	494
By "Anonymous."	
MILITARY MISCELLANY	461
By "Hyderabad."	
MILITARY NOTES	49, 230, 341, 510
NEUVE CHAPELLE, A CRITICAL STUDY OF THE BATTLE OF—	193
By Captain O. G. Body, D.S.O.	
NIGERIA IN 1929.	185
By Bt.-Lt.-Col. A. E. Percival, D.S.O., O.B.E., M.C.	
ORGANIZATION.—	
THE NEW—	131
By Captain B. C. Fletcher, M.C.	
THE NEW INFANTRY—	282
By Brigadier L. F. Renny, C.M.G., D.S.O.	

	Page.
POLO MORE NOTES—	227
By “Gopti.”	
PROPAGANDA, ITS THEORY AND PRACTICE—	139
By Captain A. L. Pemberton, M.C.	
RESERVISTS, ORGANIZATION OF THE TRAINING OF INDIAN INFANTRY—	488
By Major E. L. Ricketts, O.B.E.	
REVIEWS	{ 105, 267, 417, 549
SERINGAPATAM, THE SACK OF—	276
By Lt.-Col. C. C. R. Murphy.	
SINGAPORE, SIR STAMFORD RAFFLES AND—	29
By “Anonymous.”	
STRATEGY, A RE-DEFINITION OF—	117
By Captain B. H. Liddell Hart.	
TACTICS.—	
THE TACTICAL HANDLING OF AN INDIAN BATTALION	172
By “Jat.”	
SOME FURTHER NOTES ON THE TACTICAL HANDLING OF AN INDIAN BATTALION	465
By Captain S. W. Bower.	
TALES OF A TAIL-TWISTER	18
By F. C. M.	
UNIVERSITY TRAINING CORPS, ANNUAL CAMP OF A—	314
By Captain J. W. Pendlebury, M.C.	

MAPS PUBLISHED BY THE SURVEY OF INDIA

Are obtainable from the Map Record and Issue Office, 13, Wood Street, Calcutta, on the Public Service—on Cash Payment or Book Transfer, and, for private use, on Cash Payment or V. P. P.

Forest maps are obtainable only from the Officer-in-Charge, Forest Map Office, Dehra Dun.

Geological maps are obtainable from the Director, Geological Survey of India, Calcutta.

The Survey of India publish maps for the greater part of SOUTHERN ASIA between the meridians of 44° and 124° East of Greenwich and between parallels 4° and 44° north latitude.

2. Surveys executed after 1905 are classed as "MODERN," those PRIOR to that date are classed as "OLD."

3. Maps are printed in two styles or editions, viz., LAYERED and POLITICAL:—

(a) The LAYERED edition represents a map printed in colours with graduated layer tints of colour to show altitudes, and, shading to emphasize the hills. This edition gives prominence to the physical features.

(b) The POLITICAL edition represents a map printed in colours, but without graduated layer tints. Hills are represented by contours and shading. This edition gives prominence to the Civil Divisions of India which are shown by ribands of colour along boundaries of administrative partitions.

NOTE.—When maps are printed in colours, from mixed or old surveys the edition is styled "PRELIMINARY," and when published in black only or with hills in brown, the edition is styled "PROVISIONAL ISSUE."

4. The series of Modern maps are grouped under three Divisions:—

(I) GEOGRAPHICAL, embracing—

(a) SOUTHERN ASIA SERIES, scale 1 : 2,000,000 or nearly 32 miles to 1 inch in LAYERED and POLITICAL editions, size 36 inches \times 24 inches, price Rs. 6 per copy for the Layered and Rs. 3 per copy for the Political edition.

(b) INDIA AND ADJACENT COUNTRIES, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED and POLITICAL editions, or if from old surveys as PRELIMINARY EDITIONS; size 24 inches \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy.

(c) INTERNATIONAL MAP OF INDIA, scale 1 : 1,000,000 or nearly 16 miles to 1 inch, in LAYERED edition (without shading of hills), size 30 inches \times 26 inches, price Rs. 3-0-0 per copy.

(II) TOPOGRAPHICAL, comprising maps on:—

(a) SCALE 1"=1 MILE in the POLITICAL edition, size 24 \times 19 inches, price Rs. 1-8-0 per copy.

(b) SCALE 1"=2 MILES in the POLITICAL edition, size 24 \times 19 inches, price Rs. 3 per copy.

(c) SCALE 1"=4 MILES in the LAYERED and POLITICAL editions, size 24 \times 19 inches, price Political edition Re. 1-8-0 per copy or Layered edition Rs. 3 per copy, and from old surveys as PROVISIONAL ISSUES, price Re. 1 per copy.

NOTE.—Index charts or Key maps to the Geographical and Topographical series are obtainable gratis.

(III) GENERAL MAPS which include:—

(a) GENERAL MAPS OF INDIA, scale 32 miles to 1 inch, in sets of 12 sheets, each sheet 25 \times 33 inches, in LAYERED and POLITICAL editions, price Political edition, Rs. 12 or Layered edition, Rs. 24 per set. Various maps of India on the same and smaller scales and miscellaneous special maps illustrating Railways, etc.

(b) PROVINCIAL MAPS, on scales 16 miles and 32 miles to 1 inch.

(c) DISTRICT MAPS, on scales 4 miles and 8 miles to 1 inch.

(d) CANTONMENT AND TOWN MAPS AND OTHER MISCELLANEOUS MAPS, of various scales and prices.

5. MAPS CATALOGUES can be obtained at ONE RUPEE per copy, postage As. 8 extra.

6. Maps can be mounted on cloth and folded or mounted on rollers for hanging, etc., at an extra charge.

7. The prices quoted for various maps are exclusive of postage and V. P. P. charges. Any further information may be obtained free of charge from the Officer-in-Charge, Map Record and Issue Office, 13, Wood Street, Calcutta.

BARR & STROUD, LIMITED,

*Specialists in the Design
and Manufacture of*

RANGEFINDERS,

HEIGHTFINDERS,

PERISCOPES,

GUNNERY AND
TORPEDO CONTROL
GEAR,

AERIAL SURVEYING
INSTRUMENTS,

BINOCULARS,

AND OTHER INSTRUMENTS
FOR NAVAL, MILITARY AND
AIR SERVICES.

KINEMATOGRAPH PROJECTORS.

HEAD OFFICE AND WORKS :
ANNIESLAND,
GLASGOW.

TELEGRAMS :—
TELEMETER, GLASGOW,
RETEMELET, SOWEST, LONDON



LONDON OFFICE :
15 VICTORIA ST.
LONDON S.W. 1.

CODES :—
5TH & 6TH EDITION A.B.C.

DO NOT TAKE FROM ^{Am}UL ^{LIBRARY}
.05
v. 58-59
1928-29

SEP 26 1975

Digitized by Google

UNIVERSITY OF MINNESOTA



3 1951 D00 738 018 1